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AGRICULTURE
THE KEYSTONE OF
NATIONAL PROSPERITY
ESTABLISHED 1880
PUBLISHED WEEKLY

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N.J. Agr.

Records Increase The Value of Dairy Cows

Productiveness is Profitable to the Farmer---not Cow-Beauty

By Paul T. Menzel

Mark Twain once said that it was a difference of opinion that made horse racing possible. Furthermore, horse racing is largely dependent upon the class of people who find happiness in taking a chance on getting something for nothing, in addition to having the satisfaction of forming their own opinions about which horse will win the stake. However, altho every farmer who goes out to buy a cow takes a chance on that animal's being good enough to justify him paying the price asked, it is not for the sporting pleasure that he buys the cow. An expert buyer of dairy cows who has brought thousands for a large milk producing corporation, and who is really uncanny in his success in buying cows told me that in general a man was a fool for paying much more than beef value for a cow, no matter how good she looked to be unless he knew that the animal in question was a good producer. His experience and advice bear out the opinion of all other expert judges of dairy cattle who say that a cow may look to be a good probability, but that you may be wrong as easily as right. Consequently, this element of chance greatly thwarts the sale of dairy cattle and often prevents a man from buying what seems to be really good stock.

It is not at all uncommon for cattle at a sale to bring prices that can never be made up by the productivity, or rather lack of productivity of the animals. I have more than once in the last few years seen cows sell for as much as $200 that would hardly pay for their feed, as was proved after they were put on test and records were kept. Even if they are nice looking cows, cow beauty has not yet reached high enough value that the farmer can afford to pay for it without something else more profitable to go with it. It is rather the exception that a cow that is bought without a definite knowledge of what she has done at the pail, turns out better than was expected, or as well. To be sure, the man who sells the cow doesn't usually get up in the sale ring and tell a string of lies, but even if he told all he knew about the cow he would not be able to tell within several hundred pounds, how much milk she had given in a year if he did not have actual records.

Because of this element of chance, which is actually a serious matter, and which cannot help but have a great effect on the progress and stability of milk production, it would be an untold blessing to everybody concerned, if a farmer could go to a sale to buy tested stock which he knew from authentic records had actually produced a certain amount of milk. I often hear farmers say that they would like to get better cows than they have, and sell the poorest ones if they could feel sure that if they bought other cows the new ones would be worth what they cost, and would really be better than the ones sold. And it is true, because I have been at several sales where cows were sold that had been on test in a Cow Testing Association. The records were shown in each case, and altho some of the animals did not have as good records as would be expected from their appearance, the bidders knew just what they were getting and did not have to allow for taking any chances. Those that had good records, and were better than they looked to be, brought as much as $50 to $75 more than they would have brought without the records. At one sale of high grade Holsteins cows, the owner had weeded out his herd of 20 cows to the best ten, none of which gave less than 10,000 pounds of milk. About ten more were put up for sale, most of them having records between 9,000 and 10,000 pounds, and a few in the 8,000-pound class. The records were given with each animal and, altho it was several years ago, the prices ranged from $300 for the best animal, $250 for the majority, and $175 for the lowest. At that time $150 was considered a high price for a cow.

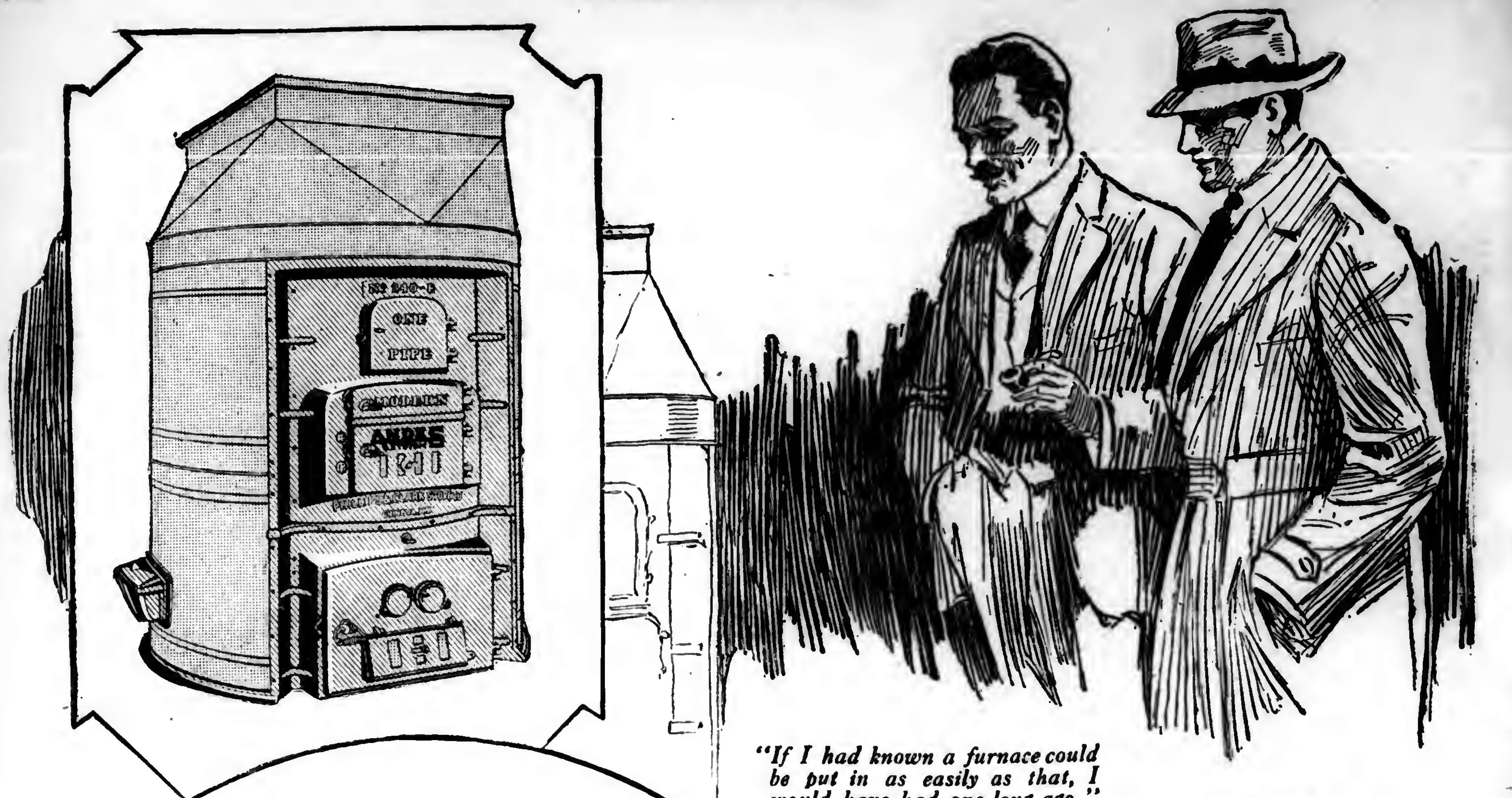
No Farm Implement Brings Greater Returns Than the Manure Spreader

Similar cases are very common. A young farmer who started out for himself five years ago with a herd of grades and several purebred heifers has just recently replaced all his grades with purebreds, and at a sale last winter sold his grades for an average of nearly $100 more than he paid for them. He simply sold them on their records.

Examples of this sort are proof that the farmer would rather pay more for a cow of even medium quality if he is sure that he knows just what he is getting, than if he has to take a chance on being a loser. Any sale of high-class, purebred animals consigned by reliable breeders is ample proof that the buyer is willing to pay for security. At a recent sale of high-producing grades held under the direction of a cow testing association, one animal sold for $700 because she had not only wonderful dairy conformation, but she had produced an amount of milk that would soon pay for herself. Other prices were good enough to have done credit to purebreds. Sales of this nature are a great boon to the dairy industry, because the man who sells the stock gets a price that makes it worth while for him to keep and raise good stock and, moreover, it is a blessing to the buyer.

These facts all points out that there is a wonderful opportunity for any man to reap a golden harvest and at the same time do a lot of good toward his fellow farmers by raising good stock and keeping records, and selling his surplus upon its production merits. In order to secure a stability and reliability in such a field, the records should be kept a disinterested party. The extension service of the state agricultural colleges, thru the medium of Cow Testing Associations would be the most feasible plan. In case a small herd owner did not belong to an association, or, if one was not available, he could have his herd tested by the same plan under which Registry of Merit testing is done for purebred cows; that is, the college sends a presentative to perform the test and keep records. No matter what the details of the plan, the herd owner would be given a certificate of the performance of each animal, and animals coming up to a certain standard would be entitled to entry in The Registry of Production, which would correspond to the Advanced Registry or Registry of Merit for purebreds. In some states this work is already under way, and it is proving

(Continued on Page 9.)



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3

GENTLEMEN:—My Andes One Pipe Furnace is very economical in fuel consumption and heats my ten-room house to perfection.—WILLIAM H. TURRELL, Montrose, Pa., March 31, 1919.

GENTLEMEN: — Thirteen room house. Seven tons of coal used this year in a 260 Andes One Pipe. Going to move into another house at present heated by furnace of another make. Going to remove present furnace and put in Andes One Pipe.—JOHN BACKUS, Livonia, N. Y.

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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880
PUBLISHED WEEKLY

The Lawrence
Publishing Company
Philadelphia

Spray Potatoes—It Pays

Experience and Experiments prove that Spraying is good Crop Insurance

H. J. Evans
Nassau County, L. I.

There is no use in arguing, spraying pays when done properly, which means in season and when applied correctly. We spray potatoes for two reasons; to control insects and to control diseases. The insects are the Colorado potato beetle, flea beetles and lice. The most serious disease is late blight which is usually followed by rot. A spray for all of these troubles can be applied at once.

To control insects, we must spray according to the kind of insect we wish to control. If it is a biting insect, like potato bugs or flea beetles, we use lead arsenate or some other arsenical, at the rate of about five pounds of powder to fifty gallons of water, in order that the biting insect will eat the poison, which is on the leaves, and die. For sucking insects such as lice we spray with a mixture which will kill them when it hits them, or what is known as a contact spray. The best mixture is Black Leaf "40," or a commercial preparation of nicotine sulphate. Usually three-quarters of a pint to fifty gallons of water is enough, providing it is mixed with some other spray material or with about three pounds of soap, if applied alone.

Blight Control

To control late blight it is necessary to have a mixture containing copper. Home made Bordeaux is as good as any ready mixed preparation on the market. It is easily and cheaply made, especially if water is piped to a mixing platform, where it can be run into barrels for making the solution and into the tank of the spraying machine.

Stock solutions of copper sulphate and lime are usually made so that one gallon of the stock solution will contain one pound of either copper sulphate or of lime. Then it is easy to make a 4-4-50 solution by using four gallons of each solution and forty-two gallons of water. The tank on the machine should be half filled with water before the four gallons of vitrol solution are added and this thoroly mixed before the four gallons of lime are added. The water is added to make up a total of fifty gallons.

The Mixture

Bugs and flea beetls are usually waiting on Long Island for the potato plant to come up. Potatoes are usually sprayed for these insects a week or two after they emerge from the ground. It is not necessary to add Black Leaf "40" until the time the potato lice appear, which is usually about June 15.

Some growers begin using Bordeaux mixture at the first spraying to prevent blight. This is a good plan because then the inside of the plant is covered with the spray mixture and later sprayings cover new growth. It takes very little longer and the cost is not much more when Bordeaux is added to lead arsenate at the early spraying. Bordeaux mixture is the cheapest kind of crop insurance against blight, that there is on the market. All three of these mixtures may be added together, and if you must spray for bugs, why not spray for blight? Too much cannot be said in regard to using a pressure of at least 200 pounds, in order to get a spray instead of a sprinkle. The nozzles should be arranged so that both sides of the leaves are covered if possible. Good results can then be expected.

Spray Outfit Equipped With Three Nozzles to Each Row and 200-lbs. Pressure

Experience of a Farmer

G. T. Powell of Glen Head, L. I. has long advocated spraying and has run his own experiments to find out how it could be done most efficiently and economically. The above statements regarding spraying coincide with his practice and a few facts about his results last year will be interesting.

An Attractive Farm Home and Buildings

To enable one to determine the benefits of any farm practice, it is necessary to leave checks or untreated plots. This need not be a large area, but enough to see results on the treated part. Mr. Powell uses about one quarter of an acre as a check plot. He sprayed six times last season at intervals of about ten days to two weeks. He used 4-4-50 home made Bordeaux adding about four to six pounds of lead arsenate powder for bugs and when lice were prevalent, about one pint of Black Leaf "40." He used two nozzles to each row and a pressure ranging between 175 and 200 pounds, and sprayed at the rate of fifty to one hundred gallons an acre for each spray.

When digging time came, he dug 282 bushels to the acre in the sprayed field in all parts except the unsprayed area. Here he dug at the rate of 101 bushels to the acre—only 36 percent of the amount dug on the sprayed part of the field.

The year 1919 was a bad season, but a glance at Mr. Powell's averages for nine years shows an average increase in yield of over 52 bushels to the acre. This includes years of no blight, as well as years of much blight. Needless to say, he continues to spray each year. He knows it pays because he has proved it by records. With care and study, most any farmer could do as well. It pays to spray as insurance against loss of the crop by blight, and it protects the farmer's investment in seed, fertilizer, machinery and labor.

WASHINGTON COUNTY FARMERS FORM ASSOCIATION

In Odd Fellows' Hall, Wednesday Evening, the Washington County Agriculture Association held its regular monthly meeting.

The constitution, which has been in course of preparation, was adopted.

Article I of the constitution, which sets forth the purposes of the organization is as follows:

"Section 1.—To increase the efficiency of all the farmers' organizations and farmers in the county by bringing to each of them the support of every other local farmers' association for the benefit of the farmers."

"Section 2.—To enable the farmers of the county to speak in a united way upon questions of public concern."

"Section 3.—To encourage and develop all the interests of rural life, such as education, production, transportation, distribution, sale of products, purchase of supplies and the development of community spirit and service in every neighborhood.

Article 3 is Membership; Article 4, Organization; Article 5, Meetings; Article 6, Terminations and Article 7, Definition.

The term "farmer" is thus defined: "The term farmer, wherever used in the constitution or by-laws shall be interpreted to mean any person, male or female, who owns or rents land for farm purposes and personally devotes his or her time, in whole or in part, to the work of the farm and home or to their management. The term farmer shall also include men and women employed on the farm, including members of the family."—Marylander.

"What are you going to run? The mile or two-mile?"

"I don't know. I'll tell you at the end of the mile."

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PHILADELPHIA, PA., JULY 3, 1920

VOLUME 48 NUMBER 1

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Farmers' Week

SEVERAL hundred farmers availed themselves of the opportunity to visit State College and inspect the experimental work and the crops on College Farm last week during the Summer Farmers' Week. As was expected the attendance was smaller than it would have been under normal conditions since the lateness of the season and the great scarcity of farm help, together with the rains of the week kept other hundreds from enjoying this instructive and enjoyable outing. It was difficult to approximate the number in attendance because they were not all in one place at any time, but the hundreds of automobiles on the ground, coming from every part of the state and containing men, women and children, was proof that the total attendance was big.

It was most gratifying to hear as one mingled with the crowd the expressions of interest and approval. Many of the visitors had never before been on the grounds during growing season and every one seemed to take a live interest in the lines of work, which he or she was doing at home, and all were especially pleased with the way the college people explained the details and answered questions. Many visitors were overheard to remark that they never before realized what was being done and how much there was to be learned at State College. One intelligent looking farmer expressed himself thus: "We backwoods fellows get to thinking that we know about all there is to know about farming and would probably keep on thinking that if we did not get out to a place like this and find out how much there is that we don't know."

Such a visit will show the uninitiated that the work at the College is not all plat experiments by a long ways. The institution now owns about 1,800 acres of farm lands. Farm operations are carried on in regular farm style and the teachings of the plat and laboratory are applied to actual farm operations. Altho the real purpose is demonstration rather than profits, since it is often valuable to learn that a method or system is not profitable, yet a great deal of net profit results from much of the work—the net profits from the horticultural division alone being $14,000 last year.

The Summer Farmers' Week is a good thing and should be continued.

Cowardly Side-Stepping

IN SPITE of the fact that all the great farmers' organization were united in urging the passage of certain bills for the benefit of agriculture and hence the whole country, Congress adjourned without passing any of them, political expediency no doubt being the reason agreed upon.

With the country facing a food shortage, and that shortage due in part to ills which proper legislation would help to remedy, it would seem the part of wisdom to have relieved the situation by passing the needed legislation. Among such bills are the Volstead-Capper bill which would legalize cooperative marketing associations, the packer control bills, the cold storage bill, the pure fabrics bill, and bills to enforce pure feed, pure seed, pure fertilizers, etc. All these have a direct bearing upon the success of farming and the lack of them tends to discourage the farmer to say nothing of making complete success impossible. A case in point is the pure fabrics bill. As all wool growers know there is now no market for wool. The bottom has dropped out and the progress made during the past four years in reviving the sheep industry has received a set-back from which it will take years to recover. A great part of the trouble is due to the absence of a law compelling manufacturers to properly stamp their cloth. Of the 620,000,000 yards of "all wool" cloth made during 1919, 380,000,000 yards were shoddy or contained shoddy. Yet the public paid prices which should have purchased virgin wool goods. Today, the stores are full of shoddy clothing while a billion pounds of wood is stored in warehouses.

These bills will come up again and will possibly be passed, but in the meantime the industry of farming suffers at a time and in a way that will seriously affect the welfare of the nation in the immediate future.

Farm Labor in Maryland

AN ENTERPRISING Baltimore paper is making a personal investigation of the farming conditions in Maryland with a view of finding out how much truth there is in the prophecy that the country is threatened with a food shortage. The reporter traveled over 800 miles of the state and found evidence everywhere that agricultural production is likely to be far below normal. Some crops will show small reduction this year because they were planted last year, but the labor shortage has forced a curtailment that is really ominous. The short day and high wages in other industries have drained the countryside of wage workers and farmers are facing harvest time with no help. What help is available is demanding $5 to $8 per day and that means a short day and transportation into the bargain. In most places only 80 to 85 percent of the usual acreage has been planted and this will be further reduced next year unless labor conditions improve.

Watch the Tax Bills

WITHOUT doubt there will be strenuous endeavors made to have the next Congress make radical changes in the system of levying federal taxes. In fact, there is already considerable agitation to have the burden shifted from where it is now to the shoulders of the rank and file by the adoption of a sales tax in which every one who sold anything would pay a government tax. There is no question but what there is need for revision and improvement in the war tax law, but it should be with the purpose of further strengthening it in the direction of collecting it from those most able to pay—the people who profited so greatly from the world's extremity during the war. That was the intention of the present war-tax law, but in actual practice it is passed on to the public by an increase in prices, in many instances evidently much greater than the tax. We must fact the fact that it will be necessary to raise great sums in taxes as long as this generation lives and longer, and the greater care should be exercised to the end that capital as well as labor shall pay its just share by a scale based upon ability to pay. If there is or has been anything in the way of a privileged class it must be made to pay in proportion to its privilege.

Just why the proposed plan to tax merchants and others a rate of one percent on sales will relieve the general public is hard to understand. Will it be more difficult for the retailer to pass on the tax to the buyer than for the excess profit taker, the seller of luxuries and the big income receiver? The same old argument is said that if you tax capital heavily it will discourage industry and investment. There should be no class exemption, nor should any class be over-burdened. A strict regard for honesty and fairness will be best in the long run.

Our Washington Letter

AGRICULTURAL EDITORS MEET

The American Agricultural Editor's Association held a meeting in Washington, June 17-19th, for the purpose of investigating the United States Department of Agriculture, and ascertaining to what extent larger appropriations are needed by the department, what changes may be made to increase the efficiency of each division and bureau, and what can be done by the farm press to aid the department and thru co-operation with it enlarge its usefulness to the farmers and the nation. Editors of agricultural papers from all parts of the country were in attendance, the Middle West and South being strongly represented.

The delegates were divided into eight committees, each committee visiting two divisions or bureaus. They interviewed the chiefs and their assistants, in regard to their duties, the present status of their work, their needs and their plans for the future. These investigations were necessarily limited in their scope, nevertheless the committees accumulated in the aggregate a vast fund of information concerning the department and a comprehensive idea of the extent of its many activities.

The editors' conference opened with an address by Secretary of Agriculture E. T. Meredith, in which he spoke feelingly of the great loss to the farmers and the nation that would result from the reduction of the appropriation for agriculture the coming year. Agriculture really receives less than $15,000,000, according to Secretary Meredith, which is $6,000,000 less than the department's estimate as to its needs and $2,185,000 less than last year's appropriation. This cut of a few thousand dollars in some instances compels the discontinuance of investigation work, thereby causing a total loss of the many thousands of dollars that have been already spent on these particuar investigations. The low salaries allowed the men in the department of Congress are causing many good men to leave, and several men now holding on have been offered twice their present salaries to leave the department. Only because of their patriotism and intense love for their work is the department able to keep them. With all this pretense of economy, and against the request of the Department of Agriculture and the farmers' organizations, that it be stricken from the appropriation, Congress voted for the Congressional seed distribution which will cost the government $239,000.

A United States Chamber of Agriculture organized on the same lines as the United States Chamber of Commerce, was advocated by Secretary Meredith. He called attention to the referndums conducted by the Chamber of Commerce as a suggestion for one of the activities of a Chamber of Agriculture. Acting as the clearing house for all the farm organizations, it would enable the united farmers of the country to crystalize their sentiments and demands into concrete form for presentation to Congress, and they would be accurately represented at committee hearings and conferences. How all these organizations of farmers and so-called farmers' organizations of diverse opinions from conservative to ultra radical could be brought under one central representative organization, was not explained by the secretary of agriculture. It was suggested, however, that with the exception of one or two extremely radical organizations, the farm bodies are so nearly agreed in their general principles and demands that there is no logical reason why they should not unite their forces under the Chamber of Agriculture proposition.

In their investigations the agricultural editors found much to substantiate Secretary Meredith's statements in regard to the needs of the Department of Agriculture. In all the departments the salaries paid are not sufficient to keep the men, and many are leaving for other positions.

In the Bureau of Soils, of which Milton Whitney is chief, it was found that the appropriations for soil surveys had been reduced from $198,000 for a number of years, to $178,900 for 1921. "This action of Congress had discouraged our men, says Dr. Whitney, "and we have lost about fifty percent of our field force including the older and more experienced men of the soil survey."

The Bureau of Plant Industry, of which William A. Taylor is chief, has suffered a serious cut in appropriations, which will greatly curtail its work, especially in plant and plant disease investigations. The committee decided that if the bureau could have the money appropriated for the Congressional free seed graft, it would about make up the reduction in appropriations and enable the department to continue its investigations.

In its report the committee investigating the Federal Horticultural Board suggested that the Quarantine Board be composed of seven members, including one farmer and one nurseryman. The law now provides for five members, all in the Department of Agriculture. It was recommended that the insecticide and fungicide law be strengthened and additional funds provided to administer the law.

In the office of Farm Management and Bureau of Public Roads the committee was impressed with the earnestness of all the people employed in these bureaus, finding them just a eager to get results for the farmers as the farmers were to have them. Rural engineering work is being neglected. No investigations are being conducted with tractors or other farm machinery. It was the belief of the committee that more money should be provided for this purpose. The Bureau of Public Roads, in addition to its highway work, is conducting extensive drainage investigations and development projects.

The Bureau of Animal Industry is one of the most important departments of the government service. It has discovered and perfected the means of controlling the principal animal diseases, eradicated the cattle tick from a half million square miles of formerly infested territory, and excluded from the United States ten serious animal scourages present in other countries. It is now developing a breed of sheep about equally valuable for wool and meat, conducting a 20-year experiment to determine how the milking qualities of beef-cattle are transmitted.

Some interesting facts were brought out in connection with the committees' investigation of the Division of Publications. It was found that of the 480,000 copies of The Yearbook printed, the Department of Agriculture has 30,000 and Congress the remainder. The committee suggested taht the Secretary's reports and the statistics be printed in a small volume and the remainder of the contents of the Yearbook be eliminated; but the fact was disclosed that this plan has already been proposed, but Congress had turned it down. The Yearbook is used by Congressmen and Senators in a similar manner to the free seed distribution, the object of their distribution being to make the would-be statesman popular with his constituents and thereby gain votes. The Farmers' Bulletins are used in much the same way. The cost of printing The Yearbooks is about one dollar each, making the total cost, including mailing, above $500,000. It was the opinion of the committee that the department was turning out much more printed matter than is necessary; that much of the work of disseminating popular information might better be left to the agricultural press.

Dan Wallace of Minnesota, chairman of the committee investigating the Bureau of Markets, in making his report remarked that the Bureau of Markets had heretofore not been "sold" to the farm paper editors. The committee suggested that the Bureau of Markets issue popular circulars describing market grades and standards; that it make a study of the cost of marketing the various farm products; that there be a course in marketing established at each state college of agriculture; that there should be a co-ordination of Federal and State authorities in marketing; that foreign representatives should be connected with the Bureau of Markets instead of the Bureau of Crops Estimates; that the Bureau of Markets and the Department of Agriculture should go farther than at present in assisting the farmers in organizing co-operative associations and in selling their products. It was recommended that the Bureau of Markets hold field demonstrations in wheat grading, and that the reports issued by the bureau to prepared in popular form, and made more readily navilable for use in farm papers.

HARRISBURG LETTER

The Final Try-Out.—As indicated a week ago, people attending the interesting meetings of farmers' week at State College found a marked change of opinion regarding the future of farmers' institutes and while no official action has yet been taken it would appear as tho the winter of 1920-21 would be the final try-out of these meetings. Begun in 1894 as the result of success of such gatherings in other states and demands of people for instruction and advice, the institutes have furnished a means for the state to take to such persons as were interested enough to attend meetings valuable information. But changed means of communication, growth of the scientific bulletin, dissemination of agricultural information and the taking of advice direct to the farm or the location where advice is required have materially altered the situation. In some counties attendance at institutes, even when weather has been good, has been absurdly small, while in others neither blizzards nor snow drifts kept down the number at meetings. In these latter counties, some of which are in the eastern section of the state, the discussions were general and beneficial. What seems to be needed in some system which will enable the secretary of agriculture to hold meetings where they are wanted and to send advisors where the meetings plan has fizzled. If practical and trained men are sent, and politicians not employed, this plan could be made most successful.

Less Politics.—Every administration seems to need its flier into the higher realms of politics. The Sproul administration has had its excursion and while it was not a roaring success yet it was infinitely more dignified than that of 1916 and characterized by much less political sheep-shearing. As far as the various departments of the state government are concerned there is less politics being played than known for a long time and the Department of Agriculture has been left free at a critical time. If this policy is pursued, and there is no reason why it should not, the Sproul administration will leave office with a record of having kept promises of a business handling of public affairs. Certainly reorganizations of Agriculture and various other branches have been the subject of much favorable comment in letters coming here and less criticism in newspapers, accepting these two lines as a means of ascertaining what people think.

The Crop Estimates.—Estimates of various staple corps being made just at present are very gratifying, when one considers the weather and other conditions, but it unfortunate that people should get the idea that the stuff written about is in the barn. As a matter of fact there has been some comment upon the size of crops, in prospects, that is misleading. The showing on grains is better than hoped for, but the hands to harvest are a problem.—Hamilton, Harrisburg, Pa., June 29.

It's pretty difficult to keep a picnic lunch appetizing till it's eaten, without plenty of waxed paper. Better keep a good supply on hand.

NEW YORK LETTER

Potato and Cabbage to Be Pooled.—A study of last year's shipments of cabbage and potatoes in Central New York Counties showed over a million dollars' worth shipped in this section in carload lots. The farmers of the section have organized to secure better selling methods. They have elected a director from each shipping point. They will employ agents of the North American Fruit Growers Exchange to sell in the highest markets, on a commission. No car will be opened except in the presence of the agent to prevent fraud. Better grading and close touch with the demand is expected to save the producers thousands of dollars in these two crops, heretofore neglected by cooperative agencies. The plan is not expected to boost retail prices.

To Provide Farm Help.—W. N. Giles, master of the State Grange, with other farm leaders, has been appointed by the Lieutenant Governor as a committee to attract labor to the farms in sections where most needed. Factory workers, firemen and others will be secured to help on the farms in the harvest. The committee solicits suggestions from rural people in this matter, also as to methods of increasing production and making rural life attractive.

Dairymen Act.—St. Lawrence Co., dairymen will oppose the publicity work of oleo manufacturers at their fairs, and will arrange for booths to show the food value of butter. The promotion of purebred Holsteins will aso be emphasized.

Trailers Useful.—A dairyman who has hauled a trailer 15,000 miles behind his light runabount pronounces it invaluable. He carries cows, bulls, calves, lumber, grain, large trees, coal, wood and other items up to a ton in weight.

This is practical where a truck is not warranted, and enables a farmer to take advantage of markets 20 to 30 miles distant.

Million Dollar Farm Business.—The desired million dollars capital stock promises to be secured very easily for developing the new Grange League Federation Exchange, Inc. Several counties are already over-subscribing with no actual canvassing. In the state 2500 canvassers are busy selling shares at $5 each to farmers.

Crop Notes.—Many corn fields had to be harrowed up and sowed to millet at the last moment due to poor seed and drought. Hay promises a heavier crop than was expected last week, as a general rain has stimulated its growth. Alfalfa cutting has begun, with a light crop. Wheat is heading fairly well. Fruit of all kinds excepting strawberries looks promising.

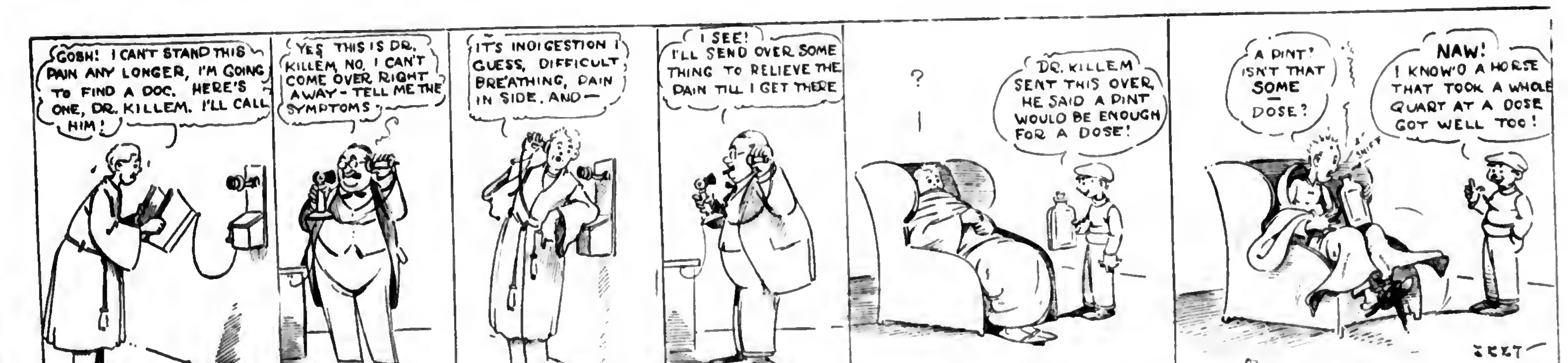
Farmers' Marketng Capital.—There are 225 successful cooperative farm organizations in the state to sell farm produce, and to buy supplies. They have a total capitalization of about $10,000,000, with every indication of growth and increased capital.—F.

NEW JERSEY NEWS

Prevent Price Reduction.—There is a growing criticism, and a very just one, among consumers, of the practice of retailers failing to lower the prices for fruits and vegetables coming to them from farmers and other New Jersey growers, following the reduction of cost to them by the producers with the advent of increased amounts of the products. The situation is becoming so acute in this state, that many housewives are not purchasing some of the high-priced commodities, and in many cases, marketmen and store-keepers are feeling the effects. Home grown fruits are now crowding out produce grown in distant sections from state markets, and they are very much in demand, particularly from persons who can well afford foods high in price. The strong demand and the high cost of production of these kinds of produce, designated as "extra earlier," has caused a big cost to be set upon them by the grower with the result that the retailer is taking advantage of the opportunity to pass on to the consumer more than a high cost of production. As fruits and vegetables come into the markets in the municipalities in extra large quantities, there will be a decrease in the call from the marketmen, and the consequence will be that there will be a lowering of the wholesale cost. But the people of New Jersey do not feel that the prices will come down for all kinds of fruits and vegetables to a point that will fit the size of their pocketbooks, because the retailers will continue to keep the figures up. It is generally understood that the present practice of the retailers is working a grave injustice to both the consumers and growers, and the sooner a solution is found for the problem, the quicker will come peace between the housewives and the marketmen and others who deal in produce in retail way. It has been said on good authority that the method to be employed to bring down the cost of foods is refusal of the consumer to purchase fruits and vegetables for which exorbitant charges are asked. Peas sold in New Jersey on June 8 last for $4 per bushel, wholesale, while the general retail price was 35 cents for a quarterpeck or $6.40 per bushel. After June 12, the market declined, and has been around $2 per bushel since. The retail price, however, still remains with some dealers at 35 cents per quarterpeck, while others have reduced the cost to 30 cents for the same amount. The supply in the state today is ten times larger than it was two or three weeks ago, but the retail price does not reflect it. As an illustration of the condition, it has been cited by a produce growing expert that one farmer in New Jersey was offered $1.50 per bushel for peas which he saw the buyer selling for 30 cents per quarterpeck.

Crops Are Late.—All crops in New Jersey are from two to three weeks late, due largely to the fact that the forepart of the season was cold and wet and generally unfavorable for the growth of vegetation and seed germination.—Kelly.

Enameled drain boards are all right for show, but for conveniences and service give me one of good sound ash or maple, says one housekeeper.


GOSH! I CAN'T STAND THIS PAIN ANY LONGER, I'M GOING TO FIND A DOC. HERE'S ONE, DR. KILLEM. I'LL CALL HIM!
YES THIS IS DR. KILLEM, NO, I CAN'T COME OVER RIGHT AWAY - TELL ME THE SYMPTOMS -
IT'S INDIGESTION I GUESS, DIFFICULT BREATHING, PAIN IN SIDE, AND —
I SEE! I'LL SEND OVER SOME THING TO RELIEVE THE PAIN TILL I GET THERE
?
DR. KILLEM SENT THIS OVER, HE SAID A PINT WOULD BE ENOUGH FOR A DOSE!
A PINT? ISN'T THAT SOME DOSE?
NAW! I KNOW'D A HORSE THAT TOOK A WHOLE QUART AT A DOSE GOT WELL TOO!

AL Acres Ate Some New Apples That Kicked Up a Row That Night and in His Excitement Telephoned a Horse Doctor

To Get More Eggs Lice and Mites Must Go

When lice are sucking the hen's blood it takes strength away from her egg-producing organs. When mites crawl out of their holes at night and prey upon the hens, they cannot produce eggs as they should. Get rid of lice and mites and you will get more eggs. Dust your hens with **RUST'S LICE POWDER** and spray with

RUST'S LICE LIQUID
AND DISINFECTANT

Spray your hen houses and you destroy all vermin—do away with bad odors as well. Spray the roosts, dropping boards. Shoot its mists into every crack and crevice. Safe to use, but do not apply the liquid directly to the body of fowls.

Ask your dealer. If he cannot supply you, order direct. Prices, by express only. 1-qt. can, **50c.**; 2 qts., **80c.**; 1 gal., **$1.40**; 5 gals., **$6.00.**

T. W. WOOD & SONS
RICHMOND, VA.
Successors to Wm. Rust & Son.

Dust With Rust's Lice Powder

Dust this powder on the hens and chicks. Keep them free from lice. Contains no napthalene or odorous ingredients. Does not injure eggs or flavor them. Gives the fowls healthy skin and better plumage.

Price, by express:
5-ounce box, **15c.**;
15-ounce box, **30c.**;
48-ounce box, **60c.**

Contractors to the Government
TAPES
FOR TYING
CELERY
ASPARAGUS
IN FAST COLORS
Hoffman-Corr Tape Mfg. Co.
312 Market Street, Philadelphia.

Reading Bone Fertilizer
Quality Service Satisfaction

Service:—We have helped with honest advice hundreds of farmers in the East. We might be able to help you. Write us—no obligation whatever.

(This trade mark means quality)

Reading Bone Fertilizer Co., Reading, Pa.

Ask your dealer for Reading Bone Fertiliz'r. READING BONE FERTILIZER CO. Write for booklet and further information.

Buy a Farm Tractor

Farm Tractors for sale—All makes some new, exhibited at Fairs; others little used at demonstrations—guaranteed. Lowest cash prices, or on installments. Write for tractor and engine bulletin.
FARMERS' EQUIPMENT CO., Jersey Shore, Pa.

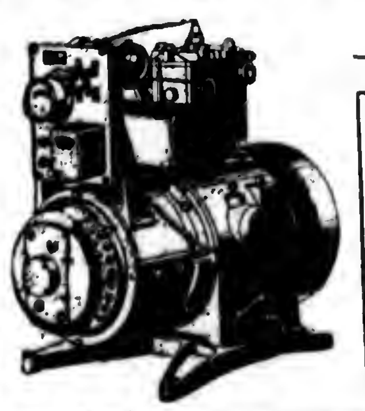
Vegetable Plants Leading varieties. Cabbage, price per 100, 30c., per 500, 90c, per 1000, $1.50. Lots of 5000 or more, $1.25 per 1000. Cauliflower, 100, 65c; 500, $2.50; 1000, $4.00 Tomato, 100, 40c; 500, $1; 1000, $1.75; lots of 5000 or more, $1.50. Send for prices on all kinds of plants. C. E. FIELD, SEWELL, N. J.

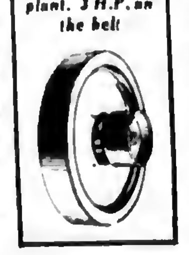
HILLPOT
$15 PER 100 FOR LEGHORNS

Hillpot Quality Chicks sturdy, lively chicks that will quickly grow into profit-producing poultry.

	100	50	25
White Leghorns	$15.00	$7.50	$4.00
R. I. Reds	20.00	10.25	5.25
Black Leghorns	15.00	7.50	4.00
Barred Rocks	$18.00	$9.25	$5.00
W. Rocks or Wyandottes	25.00	12.50	7.00

Prepaid to your door. Safe delivery guaranteed. Terms cash with order. Can not send C.O.D.
W. F. HILLPOT, Box 28, FRENCHTOWN, N. J.





Lucolite

A compact, efficient and "fool proof" electric light and power plant is the "Lucolite." Standard, high class equipment thruout—4 cycle water cooled engine—1¼ K.W. Generator—130-210 or 280 Ampere Hour Battery.

Construction of plant is simple thruout—no mystifying parts to get out of order. Every progressive farmer should send for our literature, which describes in detail, this wonderful plant. We have an attractive dealer's proposition.

Flywheel end of plant. 3 H.P. on the belt

Lucas Supply & Equipment Co.
YORK, PA.

PREPARING POULTRY FOR MARKET

By P. Thomas Ziegler, State College Pa.

PART II

Special Dressings

Capons should be dressed capon style. Use the method of killing advised for dry picking but in removing the feathers leave a circle of the latter around the hock joints, around the neck next to the head and only remove the feathers on the wing to the first joint.

Guineas should not be picked, simply dislocate the head and cool the bird thoroly. Pigeons are dressed the same way. Squabs (young pigeons) should be stuck in the mouth, dry picked, cooled and graded to size. Turkeys are dressed the same as capons.

Geese and ducks are stuck in the mouth, wrapped in several thicknesses of burlap or blankets and boiling water poured over them, so as to steam the feathers. When thoroly steamed, they can be removed without much trouble. The down feathers can be removed by pouring warm rosin over the fowl, removing the rosin when cool, which having hardened about the down feathers, removes them at the same time.

Feathers

There is a ready market for feathers that have been properly cared for, the white feathers from ducks and geese being the most valuable. Wing and tail feathers should be kept separate from the body feathers and sacked. The body feathers are placed in a bin to dry and forked over every few days to keep them from matting.

Trussing

There are three methods of drawing poultry as follows:

Cut around the vent as close as possible and draw out the intestines, tearing them off at the gizzard. Next make an incision about three inches long across the abdomen about one inch above the vent. Thru this incision remove the the gizzard crop, aesophagus, heart, liver, and windpipe by grasping the stomach, which is a thickened portion of the aesophagus just in front of the gizzard by pulling steadily. Wash out the bird and insert the ends of the drumsticks thru the abdominal incision. Strip the skin back over the neck, cut off the neck at the shoulder, clean the giblets (gizzard, remove gall blader from liver) and place them inside the fowl with the neck. Fold the skin of the neck over the back and lock the wings over it.

The second method is known as wire drawn. In this case do not remove head and legs. Insert finger into the vent and catch the intestines in a loop on end of finger and draw out, tearing off the gizzard. The bird will show no outward appearance of having been partially drawn.

In Boston drawn or the third method do not remove head and legs. Cut completely around the vent, making as small a hole as possible, draw out intestines carefully and tear off at the gizzard.

The "full draw" is used when trade so demands and for home consumption. This method is not used for poultry that is to be shipped as the flesh decomposes very rapidly.

Fowls that are wire drawn are best for shipment, ranking next to undrawn poultry, with Boston drawn standing midway between wire and fulldrawn.

The objection to undrawn poultry is that the flesh is likely to be contaminated from the intestines.

When trussing for home table or a restricted retail trade, it is usually desired that the birds be ready for cooking and thus the following methods are common for broilers and roasters.

Broilers

Remove head and legs. With a heavy knife or cleaver, cut each side of the entire length of the backbone, the incisions meeting at the neck and below the vent. Then remove neck, backbone and all intestines. Clean giblets and place inside the carcass. If it is required that they be halved, split the center of the breast lengthwise. This method is best employed after the birds are cooled.

Roasters

After being cooled, singe the carcass over the flame of burning straw. (Paper is objectionable as it blackens the skin).

Remove the tough sinews and the shanks. (Sinews are removed by making an incision lengthwise of the shank between the sinews and the bone, placing the shank over a hook run thru the incision and pulling downward with sufficient force to drawn the cords from the thighs.

Remove head; cut skin over back of neck; cut in on both sides of neck and then across and remove it. Remove the wishbone by placing the bird on its rump; fold back the loose skin of the neck; scrape wishbone bare and pass the knife blade under it, cutting thru the shoulder on both sides.

Cut completely around the vent, making as small a hole as possible; draw out the intestines carefully and tear off at the gizzard. Take a stick and insert it in the vent and shove the gizzard thru the opening made by the removal of the neck. This avoids unsightly tearing which occurs when gizzard is removed from behind. Remove oil sac. Clean and wash giblets, and bird and replace giblets in the body. Fold the loose skin of the neck up over the back and lock the wings over it. Slip the drumsticks thru a couple incisions made in the skin close to the tail.

Packing

Dressed poultry is packed either in barrels or in boxes, the latter being used for the better grades of stock. To obtain the highest price all classes and grades of poultry, (except culls, unworthy of being graded, torn birds and old roosters) should be packed, one dozen in a box so that they fit snug as they look plumper when the box is open.

A DRY ANSWER

Scoutmaster (emphatically): Johnny, what are you doing there in the rain?

Tenderfoot: Gettin' wet.

COMMUNITY MUSIC CONTEST

By learning one new song or musical classic each day, Madison, Wisconsin, is becoming acquainted with the greatest musical selections thru a "music memory contest" that is being conducted by the community music class of the State University.

Newspapers, churches, schools, theatres, dealers and musicians are cooperating, and, at the end of the allotted 28 days, the people and the university students will have been taught to recognize and appreciate 28 great musical classics.

Each day the newspapers publish the name of the selection presented that day with a sketch of its composer and the story of its composition. During the day, the selection is played in music stores, schools, theatres, and other centers so that every one may have an opportunity to hear it.

On May 28 a music memory contest will be conducted in a local theatre and prizes, consisting of phonograph records, will be awarded to those who can recognize the greatest number of selections.

BLUEBERRIES ON "WORTHLESS" LAND

Luscious blueberries — many of which are three-fourths of an inch in diameter—that sell for $10 a bushel! Such is the product secured by a New Jersey grower, whose principal business has been growing cranberries but who more recently has taken up the cultivation of blueberries. At present he has 20 acres which he has planted, in part, with carefully selected wild blueberry stock and, in part, with hybrids furnished by the Bureau of Plant Industry of the United States Department of Agriculture. Not only are the berries on this track of very high quality but the yield is prolific, the older plants producing at the rate of nearly 100 bushels to the acre. The plantation is situated at Whitesbog, near Browns Mills.

GETTING OUT BROKEN POSTS

When a post decays it usually breaks off about the ground level. Before a new post can be set, the stump must be gotten out of the hole. If it is dug out it consumes considerable time and labor.

A quick and easy way to get out a broken post stump is to drive a hole with a pointed steel bar down alongside of it. The hole should go down a few inches beyond the end of the post. Attach a cap and a fuse to a half cartridge of any kind of dynamite and tamp the charge in the bottom of the bore hole. Shortly after the fuse is lighted, the stump hops out of the ground in a hurry. The hole is all ready for setting the new post.

CLOVER ROOT ROT

Usually root rot of clover becomes noticeable from the darkening and deadening of a part of the leaves. The roots are particularly affected; the fibrous rootlets disappear, leaving only a short tap root to support the plant.

In addition, the clover plants are stunted, a dry decay develops in the crown and occasionally a white mold-like growth is found on the roots.

Fly screens are not merely a means to save annoyance; they form a quarantine against fly-borne disease.

Test Crew Levick motor oil right from the driver's seat

Any novice can test the quality of the oil he puts into a motor. It requires no testing device or chemical laboratory.

The one biggest benefit a motorist derives from quality oil is also its test—lasting power.

Lubricants break down (or carbonize) from heat. The better quality a lubricant possesses the longer it resists heat, and consequently the longer it lasts.

The next time you put in oil make a note of the mileage it yields—then test Crew Levick oil exactly the same way. You'll be surprised that there could be such a difference in lubricants on this score—you'll notice also that your engine is smoother and is perhaps a little keener.

Try it and see—it's a point worth proving, for it affects your pocketbook and your pleasure in driving.

Wherever you see the Crew Levick diamond you can buy these Crew Levick products.

Motor Oil
Cup Grease
Special Gear Compound
Auto Soap
Gasoline

Crew Levick Company
Philadelphia Boston New York Syracuse
131 N. BROAD ST., PHILA.

Subsidiary Cities Service Co.

One of the Country's largest producers and refiners of oil
CREW LEVICK

Stock Raising in WESTERN CANADA

is as profitable as grain growing. Successes as wonderful as those from growing wheat, oats, barley, and flax have been made in **raising Horses, Cattle, Sheep and Hogs.** Bright, sunny climate, nutritious grasses, good water, enormous fodder crops—these spell success to the farmer and stock raiser. And remember, you can **buy on easy terms**

Farm Land at $15 to $30 an Acre

—land equal to that which through many years has yielded from **20 to 45 bushels of wheat to the acre**—grazing land convenient to good grain farms at proportionately low prices. These lands have every rural convenience; good schools, churches, roads, telephones, etc., close to live towns and good markets.

If you want to get back to the farm, or to farm on a larger scale than is possible under your present conditions, **investigate what Western Canada has to offer you.**

For illustrated literature with maps and particulars regarding reduced railway rates, location of land, etc., apply to Department of Immigration, Ottawa, Canada, or

F. A. HARRISON
200 N. Second Street
HARRISBURG, PA.
Canadian Government Agent

HAY
W. D. POWER & CO. 601 W. 33 St., New York are the largest handlers of commission hay in greater New York; if you have hay to dispose of communicate with them.
HAY

GRADE YOURFRUIT with a BURKE grader. Accurate and satisfactory work. Reasonable in price. Prompt delivery. American Orchard Products Company, Palmyra, N. J.

Corn Harvester That Beats them all. One horse cuts two rows. Carries to the shock. Worked by 1, 2 or 3 men. No danger. No twine. Free trial. We also make Stump Pullers and Tile Ditchers. Catalog free. Agents wanted. H. P. BENNETT & CO., Westerville, O.

Thomas Edison ENDORSES THE WATER GROUND PRINCIPLE

AMERICA'S greatest authority on electricity says "Lightning rods will protect buildings, provided a good contact is made with wet earth." The Security system insures a permanently damp ground rod by placing it in a tube filled with water, which makes this rod carry off electricity, even in the dryest weather.

SECURITY
WATER GROUND LIGHTNING CONDUCTORS

have been made and used for more than 28 years. Endorsed by National Board of Fire Underwriters. Where they are used, a lower insurance premium is usually allowed. Take no chances. Get the scientifically correct water ground Security and be sure you are protected. Write for booklet and name of nearest Security dealer.

The Security Lightning Rod Company
503 Pine Street Burlington, Wis.

Summer Feeding Makes Winter Profit

Repeated tests prove that cows cannot thrive on pasturage alone. A herd that is fed only on pasturage during the summer enters the fall and winter unprepared for winter feeding; the milk flow decreases and your milk checks slump badly. Building them up again is a long and costly process; it takes time and trouble to get them back into shape. In addition to pasturage feed them

International Special Dairy Feed

Protein 15%, Fat 4½%, Carbohydrates 50%

This *guaranteed* feed contains all food elements necessary for health and energy and supplies the milk-producing qualities lacking in pasturage. Your herd will enter the fall and winter in prime condition, with a maximum milk flow—which means less trouble in care and feeding and fatter milk checks right from the start.

Begin Feeding International Special Dairy Feed TODAY and Watch Results

International Ready Ration—20% Protein, is a bulky, satisfying feed that will bring your herd to a high state of milk production. Cows like it.

International Diamand Dairy Feed—24% Protein, is a splendid high protein conidtioning feed and a particularly good one for growing stock. It makes healthy animals.

INTERNATIONAL SUGAR FEED CO., Minneapolis, Minn.

Mills at Minneapolis and Memphis

Live Salesmen Wanted

FARQUHAR

The Farquhar principle of separation ever insures clean fast threshing. We have manufactured Threshers for nearly 60 years, and our present modern line has been developed by continuous field experience.

Rake Separator shown here is a most practical and economical machine for the farmer who does his own threshing. Made in two sizes with capacities from 350 to 600 bushels of wheat a day. Suitable for Gas Engines 7 H. P. and larger.

Our Vibrator with Self Feeder, Wind Stacker, etc., is suitable for large crops and merchant threshing. Improvements giving increased separating and cleaning facilities added this year.

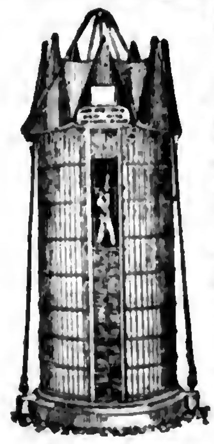
We also make a special Thresher for Peas and Beans, and a Peanut Picker.

Farquhar Threshers are best operated by Farquhar Steam and Gas Portable and Traction Engines. Illustrated Thresher and Power Catalogs sent free on request.

We also manufacture Sawmills, Potato Diggers, Grain Drills, Hydraulic Presses, etc. Write us concerning your requirements.

A. B. FARQUHAR CO., Ltd.
Box 548 York, Pa.

THRESHES CLEAN



PHILADELPHIA SILOS

4"x6" Posts, Bevelled Doors, Iron Ladder, selected material, strong hoops. A Real Silo. Opening Roof for a full Silo without refilling. Ensilage Cutters, Feed Trucks, Wood Tanks.

Write for Catalogue and Prices

E. F. SCHLICTER CO.
10 S. 18th St. Phila.

GREEN MOUNTAIN SILOS

The Green Mountain silo with the new hip roof does credit to any group of farm buildings, no matter how pretentious. With its nut-brown creosoted staves and bright red cedar shingled roof, it is a beauty.

Just as good as it is good looking, too. Each part that has to stand a strain and in a silo that means almost every part—is built extra staunch and heavy.

Green Mountain staves are of extra-heavy, clean, well-fitted lumber—creosoted to weather-proof and preserve the wood. The hoops are of extra-heavy steel with easy-fitting, rolled (not cut) threads.

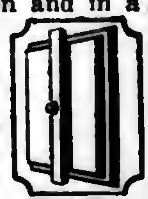
The safe-like Green Mountain door is a patented feature that insures sweet silage.

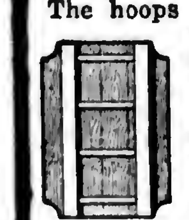
The Green Mountain anchorage system prevents warping and blowing over and holds rigid against unusual strains.

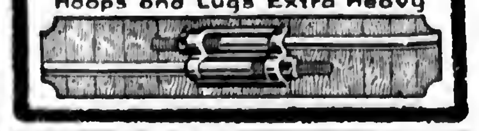
No iron parts on the Green Mountain ladder to frost your hands or pull off your mittens in winter.

There's a real reason for every Green Mountain feature. Write for free 1920 literature and get the whole story.

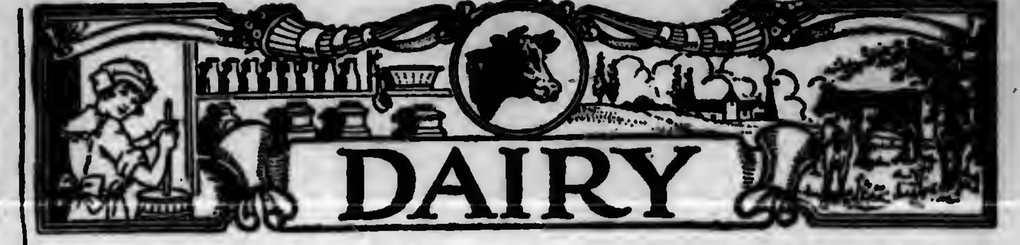
CREAMERY PACKAGE MFG., CO.
345 West St. Rutland, Vt.






Hoops and Lugs Extra Heavy

HAY Ship To The Old Reliable House
Daniel McCaffrey's Sons
623-625 Wabash Bldg., Pittsburgh, Pa.



SILAGE FOR ALL STOCK

The silo was first taken up by the Dairymen, and today we find most of the silos in the dairy sections. You can pretty nearly tell the number of cows and the progressive dairymen by the number of silos a community possesses. It is a mistake, however, to conclude that silage is not equally good for other classes of live stock; and this truth is so well known by most keepers of silos that they fail to even comment on the subject.

As silage is our cheapest source of digestible carbohydrates, it can be used profitably by any animal which feeds upon grass. The breeders of beef cattle have for many years used the silos with success, not only for feeding their mature animals but also for growing the young stock.

Fern's Oxford Triumph, Sold to F. W. Ayer of Philadelphia for $15,000.

There has been more investigation among our Experiment Stations to determine the economic value of silage as a beef maker than in any other line of feeding work. Hardly an Experiment Station equipped with a silo but what has made some test along this line, and it is interesting to note that practically every test has demonstrated that silage not only makes beef cheaper than other foods, but also makes a high quality of beef. Most of the breeders of champion show stock are using silos, and they would certainly laugh at any man who questioned their silage ration.

Horses and mules have been fed silage successfully and economically. The Pennsylvania, Michigan, Missouri and North Carolina Experiment Stations all found excellent results from feeding horses silage. Some of our large breeders and dealers in blooded horses have used silos for many years, and there is scarcely a farmer with a silo who does not feed silage in some form to his horses. Of course it should be used much as grass is used, that is, in small rations and principally for horses not at heavy work. Only good silage should be used in the horse ration.

As a ration for sheep it has long met with success, and there are many feeders who use it on a large plan. Not long ago I visited a sheep feeding farm where ten thousand sheep received corn silage as a part of their ration. It has hardly come to its own in this capacity; but the sheep feeder will certainly use the silo more in the future, especially if he wishes to make economic gains.

or poultry, fowl, goats and swine, small rations of silage can be wisely used. Some poultrymen use what is known as a chicken silo, a small silo filled with various kinds of green fodder. Sunflowers, especially, are valuable, but a mixed ration has been considered the best. For fattening swine it should not be used as the principal ration, but can be used as a small or part ration. As the feed is rather bulky, it will not do to force swine to eat too much, as their stomachs are small.

On the average farm where all kinds of live stock are kept, care should be taken to put up the very best quality of silage. This generally can be accomplished by cutting at the right period, giving care to bring as quickly from the field to the ensilage cutter as possible. Cut fine with sharp knives and pack well. These are the principal requirements for good silage. Of course it is expected that the silo be tight and smooth on the inside. With such a silo filled, it stands as a bank or storehouse from which the farmer can draw at any time and from which he can always realize a profit.

LEBANON COUNTY, PA., COW TESTING ASSOCIATION

Report For March, 1920

During the month of March, 340 cows were tested, of which 70 qualified for the honor list, either by producing over 1,000 pounds of milk or over 40 pounds of butterfat. Fifty of these produced over 1,000 pounds of milk and 20 over 40 pounds of fat.

The following men had one or more cows on the honor roll for producing over 1,000 pounds of milk: D. B. Brandt 3, J H. Light 2, Albert D. Miller 1, S. W. Heilman 2, J. A. Long 1, W. Clarke Kinney 5, Harry S. Forney 4, H. K. Kreider 1, Jos. E. Wolgemuth 2, C. C. Gingrich 4, Leonard Schott 1, Joseph Schott 1, John E. Bollinger 2, David Snyder 10, J. Frank Reist 4, Isaac Mock 2, A. Grant Boger 2, Job B. Light 1.

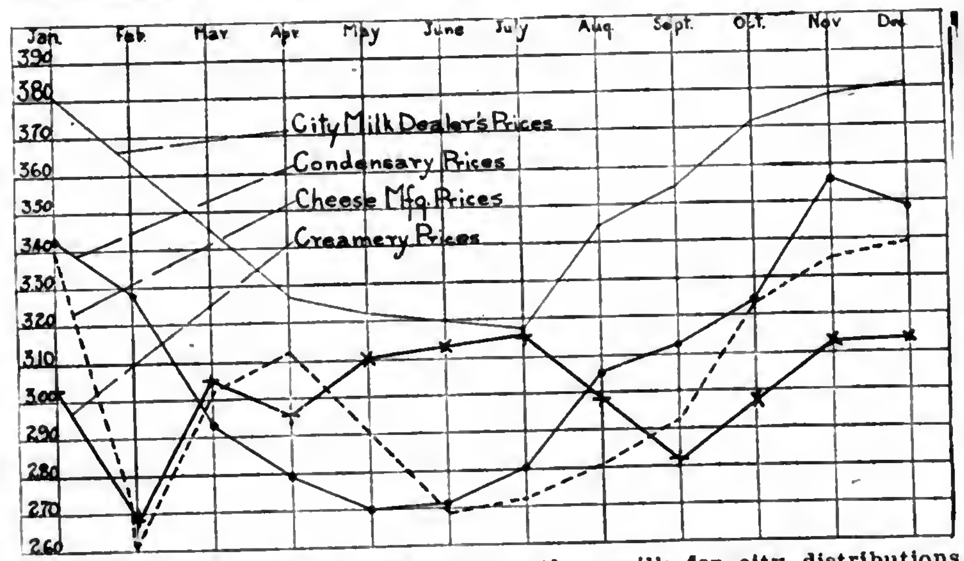
The following men had one or more that produced over 40 pounds of fat: D. B. Brant 3, Albert D. Miller 1, S. W. Heilman 1, W. Clarke Kinney 1, Harry S. Forney 1, Jos. E. Wolgemuth 1, C. C. Gingrich 3, Ira J. Light 3, John E. Bollinger 1, David Snyder 3, J. Frank Reist 2.

The highest producing cow belongs to C. C. Gingrich, producing 2,232 pounds of milk and 78.1 pounds of fat. The second highest cow belongs to the same man with 1,965 pounds of milk and 64.8 pounds of fat.

Prices of feed are as follows: Cottonseed meal $81; linseed meal $84, bran $54, Union grains $79, gluten $70, Big Six $74, Amco $76, Sucrene $56, Tioga $76.—Paul S. Bubp, Official Tester.

MILK PRICES IN 1919

The lack of any close relation in the prices of milk purchased for different purposes in 1919 is of striking interest. The value of milk purchased for butter and for cheese making purposes fluctuated greatly with no definite price relation. The fallacy of basing market milk or condensary milk prices on the price or value of milk for butter or cheese making purposes is clearly emphasized by the month of February, when the bottom practically fell out of the butter and cheese markets and the price of creamery and cheese factory milk declined automatically with the price of butter and cheese, while the supply and demand for milk for condensing and market milk purposes was entirely stable and in no way affected by unsatisfactory conditions existing in the butter and cheese markets.



Basic Price Fatcrs

In general, the basic factors affecting the prices of commodities bought and sold in the open market are supply and demand conditions. It will be noted in the photograph that the prices of milk for different uses follow somewhat the same general direction, with the exception of that used for cheese manufacture, which declined in 1919 from winter to spring and advanced again during the summer, declining in the fall and advancing again in early winter. It is evident, however that milk prices for different purposes are affected by different supply and demand conditions, or they would closely approximate each other.

In butter and cheese factories the price paid to producers for milk is largely dependent upon the market price of butter and cheese. Since these commodities are traded in the open market and their price fluctuates with the changing supply and demand conditions in the market, the average monthly price paid for milk in cheese factories and creameries necessarily fluctuates up or down with the market prices of butter and cheese.

Condensary milk prices likewise would be influenced by the market supply and demand for condensed and evaporated milk if these commodities were brought and sold in the open market at prices depending upon supply and demand conditions. Since there is very little open-market trading in these commodities and the prices are stabilized somewhat by the control of distribution exercised by manufacturers in the marketing of their trade-marked brand, price fluctuations of condensed and evaporated milk are less frequent and therefore prices paid for milk by condensaries follow quite generally the milk supply conditions existing in the territory where condensaries are located.

The prices of milk for city distribution follow quite regularly the retail prices paid by consumers for market milk except during the seasons of surplus in those sections where producers expect the milk dealers to take care of the surplus by coverting it into manufactured milk products having a lower market value than milk for city distributions. The price during surplus seasons of production under such conditions is based in part on the amount of surplus and its value for manufacturing purposes and the retail price of market milk.—The Market Reporter.

RECORDS INCREASE THE VALUE OF DAIRY COWS

(Continued from Page 1.)

an invaluable stimulus to the dairy industry.

The Registry of Production would be as great a factor in improvement of farm dairying as advanced testing has been for the great dairy breeds. It would encourage the farmer to grade up his stock not only for greater milk production, but also for stock that will bring prices much better than he could get if records were not kept. Many farmers who have scrub cows now would be glad to buy better ones if they felt sure that they were getting their money's worth when they went out to replace the poor cows. The small farmer would not have to feed a lot of young stock if he knew that he could replenish his herd with cows that actually will pay for themselves. This would be an important saving to the small farmer who often carries along so much young stock to replace his old cows that all his profits from milk production are eaten up by the young stock.

Consequently, there is a great future for the man who will raise good stock, high grades and purebreds, because there will always be a great demand for good cows, because the small herd owners would rather pay a good price for cows they are sure are good than to raise their own young stock, which is usually kept under crowded conditions.

The Supreme Evidence of
DE LAVAL
CREAM SEPARATOR SUPERIORITY

Naturally the cream separator does not make or break the average farm user. The majority of them have no sure means of knowing just what their separator may be saving or wasting.

But the big user in the whole milk creamery or milk city and cream plant does know, and in the long run the separator means success or failure in his case.

That's the reason why 98% of the world's users of factory size cream separators use the De Laval, and why the few such machines of other makes occasionally sold soon find their way to the scrap heap.

And it may well be remembered that De Laval superiority means relatively just as much to the small as to the big user. Ten dollars a month means as much to the farmer as ten dollars a day to the creameryman.

It's not only a matter of quantity and quality of cream, but of capacity, labor saving, dependability and durability over a long term of years.

A De Laval catalog helps to make these facts plain. The trial of a De Laval machine does so better still. Every local De Laval agent stands ready to prove them.

If you don't know the nearest De Laval agent simply address the nearest main office, as below,

THE DE LAVAL SEPARATOR CO.

165 Broadway, NEW YORK
29 E. Madison St. CHICAGO
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50,000 Branches and Local Agencies the World Over

For Every Farm use

Plowing, Disking, Pulverising and Harrowing Miscellaneous Belt work, Shelling, Shredding, Feed Grinding, Hauling, Harvesting, Threshing, Binding, Baling, Planting and Seeding, Stump Pulling, Sawing Wood, Ensilage Cutting and Silo Filling.

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SAVES LABOR AND TIME
Is Durable and Efficient
Write For Catalogue
FRICK COMPANY, Inc.
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WAYNESBORO, PENNA.

$1 Week

Get out into the open — have healthful sport on America's finest and best-built bicycle, the Black Beauty. Write for our catalog, select your model from our 40 styles and tell us. We'll ship at once. To make the wheel yours, pay a small deposit, then $1 a week (or $5 a month). Made at our own big factory. Wholesale direct price. 18 Wonderful Features The Black Beauty is built of the highest grade materials by the largest exclusive bicycle house in America. Its equipment includes $10 Firestone Blue Non-Skid Tires; New Departure Coaster Brake; motorbike saddle and pedals; handlebars that are triple plated over copper to prevent rust, etc. Seamless steel tubing, racy lines, dazzling nickel & enamel finish.

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Sundries Get our factory prices. Lowest in the country. Tires, rims, bells, lamps, etc. Send for Free Sundries Catalog.

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Largest Auto Wreckers in Pennsylvania
NEW AND USED PARTS FOR ALL CARS
At a discount of 30 to 75%
Mail orders promptly attended to.
Overland and Studebaker parts a specialty.
GREENE AUTO & PARTS CO.,
261 N. River Street, Wilkes-Barre, Pa.

PAINT BARN PAINT $1.32 PER GALLON

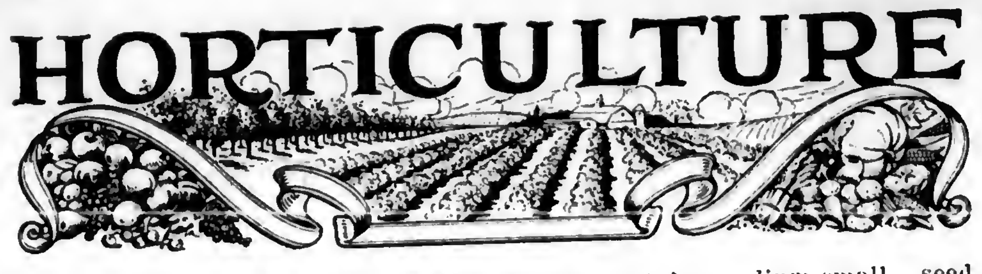
Get Factory Prices on all Paints. We guarantee quality. We Pay the Freight.

FRANKLIN CO OR WORKS, DEPT. P,
FRANKLIN, IND.

Wanted: Experienced Farm Hands, $2.25 per day with board and room, straight time. Milkers, $67.50 to $75.00 per month with board and room Address Walker-Gordon Laboratory Co., Juliustown, N. J.

CORN Harvester One man, one horse, one row Self Gathering. Equal to a Corn Binder. Sold direct to Farmers for 22 yrs. Only $25 with fodder binder. Free Catalog showing pictures of Harvester. PROCESS CORN HARVESTER CO., Salina, Kan.

HORTICULTURE



HOME SELECTION OF TOMATO SEEDS

By C. H. NISSLEY

One of the most important factors influencing the yield of both market and canhouse tomatoes in New Jersey is in the selection and use of good seed. There are three sources of commercial tomato seed on the market, namely, (1) selected seed, (2) canhouse seed, i. e., seed saved by the canhouse from the fruit of high yielding fields, and (3) cannery-run seed, i. e., all seed saved by the canhouse regardless of source.

Many successful growers are already selecting their own tomato seed, but every grower in the state is strongly urged to follow the practice of the successful ones and increase the tonnage to the acre by making the field selections and saving the seed from selected plants.

Eperimental work which has been done, as well as the results obtained by growers who have been selecting their seed for years, has proved that it pays to save your own seed if it is done properly.

The Indiana Experiment Station has found that seed from high producing plants may produce yields 600 percent greater than seed from low yielding plants, and 300 percent greater than from average plants.

Essentials

1. Make a personal inspection of the entire tomato field before first picking.

2. Carry enough stakes, so that the selected plants may be marked.

3. Stake twice as many plants as necessary to insure against loss from disease or insects. Save seed only from the best of these plants.

4. Instruct pickers not to pick fruits from staked plants.

Recommendations For Selection of Plants

One must bear in mind in the selection of seed plants for increased yields, that the plant as a whole is considered. Many, while sorting tomatoes for market, save seed from good looking fruits, regardless of the parent plant from which that fruit was produced. This method will not give the increased yields or desired characteristics.

The plant propagates itself thru the seed and not thru the individual fruit in which the seed is contained.

1. The plant must not show any indications whatsoever of Fusarium Wilt; other diseases, if the plant is not too severly attacked, will not spoil the fruit for seed purposes.

2. The plant must show a vigorous growth and have a good leaf color.

3. A heavy set of uniform fruit with indications of continuous heavy yielding characteristics is sessential.

4. The fruits should be firm, indicating good shipping qualities, and should have the varietal characteristics.

5. The fruit should be deep thruout the center, from stem to blossom end. A flat shaped tomato is undesirable.

6.—The fruit must be evenly colored thruout.

7.—The interior of the tomato should contain medium-small seed cavities, with thick walls, and much pulp. (A firm fruit indicates thickness of walls and the thicker the walls, the more solid the tomato.)

Saving the Seed

1. Allow the fruit to ripen on the stalk.

2. Save the seed from all of the larger and more desirable fruit on the staked plants.

3. After fruit is picked, place in a wooden container and mash, add as much water as pulp and stir vigorously. (If tomato is cut in half, the seed may be squeezed out and the pulp canned, thereby avoiding waste.)

4. Allow the pulp to ferment for two days, stirring occasionally so as to free the seeds.

Harvesting Lettuce Grown on a Muck Soil

5. After two days' fermentation, add water and pour off the light seed, pulp and foreign materials. The good seeds are heavy and will settle to the bottom.

6.—Wash the good seed a few times with clean water.

7.—Spread the seed out thinly on a newspaper, place in a breeze and away from direct sunlight. Dry as soon as possible. (The seed should be stirred occasionaly to keep them from sticking together.)

8. When thoroly dry, store in either paper bags or glass jars.

Do not store in air-tight receptacles.

Store the seed in a cool dry place and away from sudden changes of temperature.

Some Tomato Facts

One ton of tomatoes will produce about seven pounds of seed.

One ⅝-bu. basket will produce about two ounces of seed.

The Fusarium wilt disease is to some extent carried on the seed, this being the only serious disease known to be carried on the seed.

Seeds from rotten tomatoes are dark and may be injured by the rot organism. They will not germinate well.

Seed saved from ripe or nearly ripe fruits will germinate about 98 percent.

Tomatoes are self-fertile and usually do not cross much. When different varieties are grown together, one to five percent of the resulting seed may be crossed, but the proportion is usually less.

The pollen is shed in the morning on warm sunny days.

The falling of blossoms may be attributed to rainy or even prolonged cloudy weather, cold weather hot dry weather, too much water in the soil, an over supply of nitrogen and probably other conditions not yet fully determined.

Tomatoes will set fruit without seed, but such fruits are always very small.

Immature tomato seed will germinate, but while the resulting plants ripen their fruit earlier, the plants are weak and less fruitful.

The small amount of extra effort used to save tomato seed from selected plants will pay the biggest dividends by increasing the yield.

SPRAY GRAPES TO SAVE PAPER BAGS

It has been the custom of many small grape growers to place paper bags over the grape clusters as soon as the blooming period had passed in order to protect the berries from the grape berry moth and other pests. Paper bags are costly this year, and moreover paper is getting scarce and is needed for more important purposes than covering grapes, especially since well directed spraying at the proper time will control this insect.

As soon as the berries have set spray the grapes with arsenate of lead, using one and one-half pounds of the powdered form in 50 gallons of water, or 4-4-50 bordeaux mixture. While all the foliage should be covered, particular attention must be given to cover the young berries with the poison. Make a second application ten days later and a third application about the middle of July, as that is about the time eggs are hatching for the second brood.

Use a driving spray to force the poison in among the berries for only by this means can the grape berry moth be controlled.

ROSE BUG ON ROSES AND GRAPES

The rose bug or rose chafer is very destructive to roses, and grapes and also attacks apples, peaches and other fruits. It suddenly appears in orchards and vineyards and unless something is quickly done much damage may occur. In a few hours time they will destroy all hope of a grape crop.

There is only one remedy. Spray with sweetened arsenate of lead, using two (2) pounds of powdered arsenate of lead in fifty (50) gallons of water and add one gallon of molasses to make the poison attractive. Make the first application just before the grapes bloom and another as soon as the blossoms have fallen.

Keep roses, apple trees and other plants attacked well covered with the poison spray. If the application is not sufficient to control the insect make a second application in a week.

CELERY PROFITABLE CROP FOR GARDEN

Celery is one of the most profitable crops for gardens or small lots. It is a gross feeder, however, and requires an abundance of plant food and water.

Many gardeners apply 25 tons of manure and from 500 to 600 pounds of acid phosphate to the acre. In some cases drain tiles are put in the soil just under the celery bed; these are filled with water to supply the celery.

Giant Pascal, Golden Self-Blanching, White Plume, Easy Blanching, Winter Queen and Pink Plume are varieties that have given good satisfaction.

APPLE TREES NEED FOOD AND ATTENTION

Give the apple trees a chance to grow. If in August a short annual growth has been found, with small yellow foliage, it is safe to assume that the trees are in need of more food. The old fashioned farm apple orchard is fast disappearing, and trees are being destroyed when they fail to produce, many of them just for the lack of sufficient food.

Feed the trees with the cultivator, or with fertilizer. The former is the most satisfactory in the large orchard but for the small home group, five pounds of nitrate of soda and eight pounds of acid phosphate scattered around each of the mature trees as soon as the buds begin to break in the spring, will work wonders. Cut the grass when it is eight or ten inches high and let it lie on the ground, and the trees will make satisfactry growth when properly pruned and sprayed. Straw or strawy manure spread thickly over the sod to check the growth of grass will give much the same effect as cultivation.

Carrots Bunched For Market

Copyright 1920, by The Goodyear Tire & Rubber Co.

"Even slight jars bruise peaches—pneumatics protect them. My trucks on Goodyear Cord Tires help all my farming, which is largely motorized. These trucks go through the sandy loam of the fields to feed the machines and to haul from them—solid-tired trucks cannot do this."—W. W. Lowe, Farmer, Fruit Grower and Stock Raiser, Byron, Georgia

BETWEEN the lines of statements like this, one reads the narrative of a significant advance in farming methods effected with power machinery and trucks on Goodyear Cord Tires.

The labor shortage is being met on many farms by these pneumatic-tired trucks working with motorized pumping, shelling, grinding, cutting and threshing machines.

Since it usually is not practical to follow the field activities by moving such outfits along, their operation, to be fully efficient, must depend on quick cartage over soft ground.

The solid tire is not fitted for this hauling, because it stalls in loose soil, whereas the big Goodyear Cord Tires supply the traction necessary in off-the-road hauling.

Their immense strength proceeds from that manufacturing care which, in protecting our good name, has developed the sinewy toughness of their Goodyear Cord construction.

Farmers' reports, showing how pneumatics on trucks help increase farm incomes, can be obtained by writing to The Goodyear Tire & Rubber Company, Akron, Ohio.

GOODYEAR
CORD TIRES

Farming the Fordson way

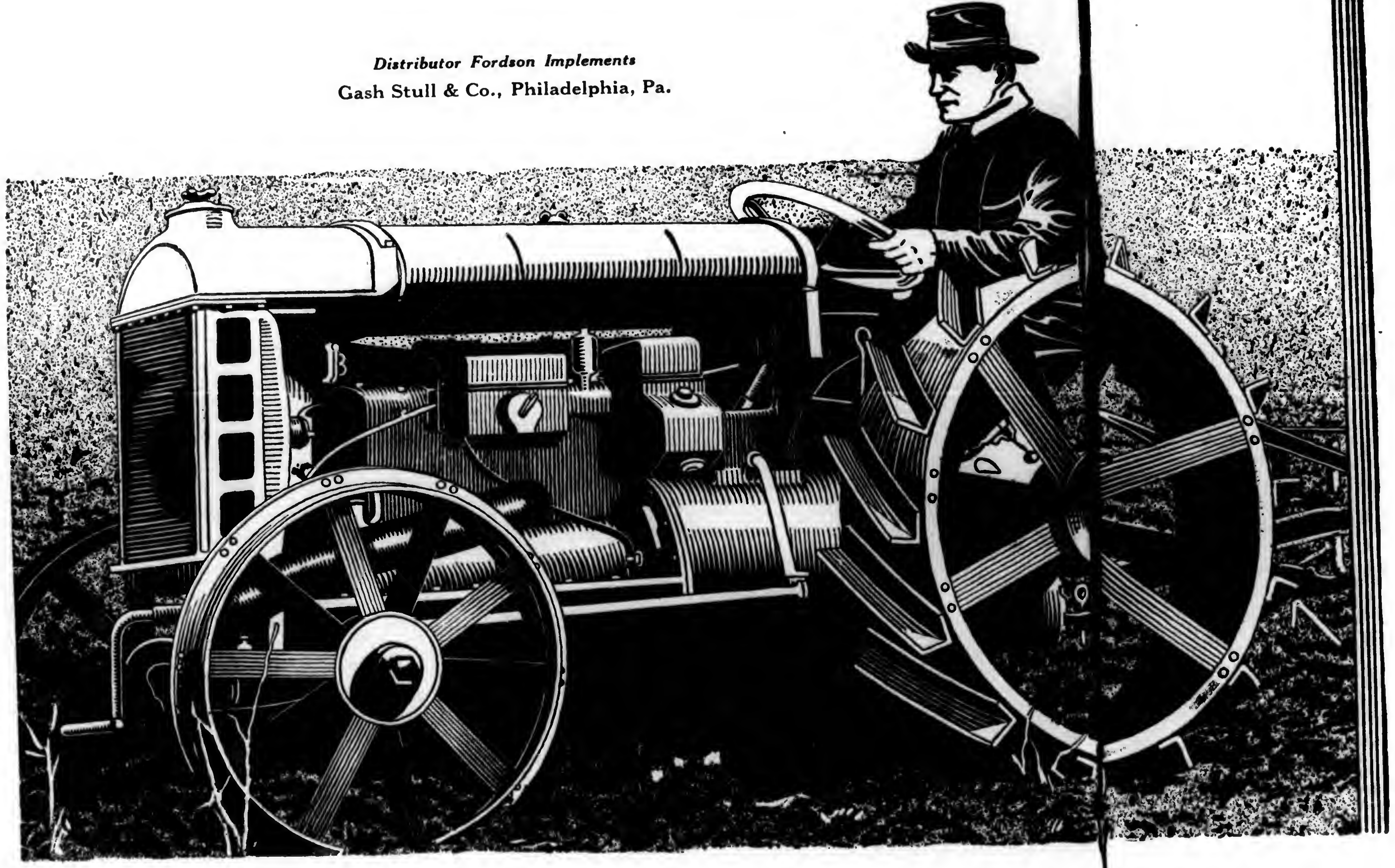
Over 100,000 farmers in every section of the country are successfully farming the Fordson way.

They find that greater efficiency in operation and increased production result from using these specially designed power farming implements.

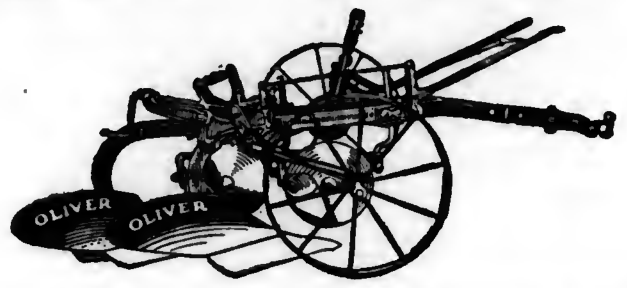
There is a specially built power farming implement for every farm operation with your Fordson tractor.

See the Fordson Dealer in your town.

Distributor Fordson Implements
Gash Stull & Co., Philadelphia, Pa.

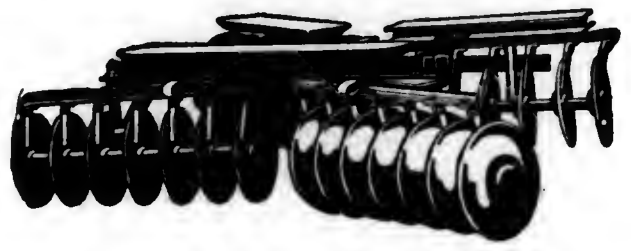


OLIVER
No.7 PLOW



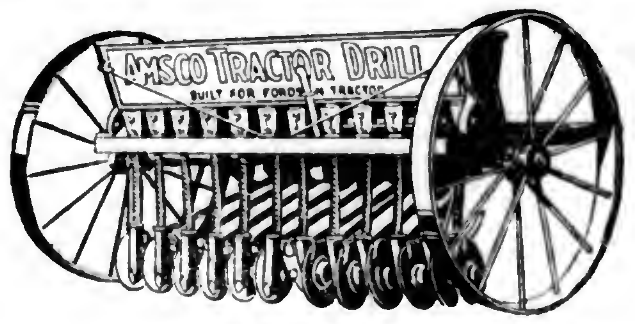
The Oliver No. 7 plow represents the most advanced design in plow construction. It is the plow that more than 100,000 farmers now are successfully using with their Fordson. It is the plow you should demand for yours.

Roderick Lean
DISC HARROWS



No seed-bed is properly prepared without the use of a disc harrow. This Roderick Lean Automatic Disc Harrow was developed exclusively for Fordson farmers. It has the unqualified endorsement of thousands of users everywhere. There are also specially built for use with the Fordson, a Roderick Lean orchard disc harrow, a spike tooth harrow, and a spring tooth harrow.

AMSCO
TRACTOR DRILL



The best prepared seed-bed produces maximum crops only when properly seeded. The Amsco Tractor Drill represents seventy-five years of drill-manufacturing experience, and is the choice of Fordson users everywhere. When you buy a drill you'll want the Amsco.

Every purchaser of a motor truck is primarily interested in the service to be gotten out of the truck—whether that service will be bought at too high a price (*Thru repair parts & upkeep*) or whether it be reasonable and *actually profitable.*

Ask any "Acme" owner whether his truck is a paying proposition—ask him about repair bills, upkeep cost etc. You'll find out more about "Acme" Trucks than we can ever tell you. You'll buy an "Acme" too.

Write us for names and addresses of farm users.

1–1½–2–3½–5 Tons

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Kills Plant Lice

To kill aphis, blow Black Flag over plants with powder gun just after spraying whole plant with water. For mealy-bug and red spider, spray forcefully with solution of two teaspoonfuls of Black Flag to ½ gallon of soapy water. Kills by inhalation. Bugs don't eat it—they breathe it, and die. Destroys flies, ants, fleas, mosquitoes, bedbugs, roaches, some moths; lice on animals, birds and plants. Non-poisonous to animals and humans. Look for BLACK FLAG trademark and red-and-yellow wrapper. Drug, department, hardware and grocery stores, or direct by mail on receipt of price.

U. S. Gov't (Bulletin 771, Agri. Dept.) shows that glass containers keep insect powder longest. Buy Black Flag in the SEALED GLASS BOTTLE instead of "insect powder" in paper bags or boxes.

BLACK FLAG
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Shoo-Fly THE ANIMALS' FRIEND

For keeping Flies, Gnats and many other insects off animals. Used and endorsed since 1885 by leading dairymen. Cows give 25 per cent to 35 per cent more milk during fly season if sprayed with Shoo-Fly.

$1.50 WORTH SAVES $20

in milk and flesh alone on each cow in a single season. Excellent for galls. Allays itching. Aids in healing cuts and sores. Excellent for lice and mites in poultry houses.

Send $1.50 for enough Shoo-Fly to protect 10 cows 2 weeks, also our 3-tube gravity sprayer. Money back if not satisfactory. Name Express Office. Booklet FREE.

SHOO-FLY MFG. CO., 1342 N. 10th St., Phila.

To Late to Classify

Try Reg. Big Type Spotted Poland Chinas. The hog of the hour. Write for prices. Satisfaction guaranteed or money refunded.
G. CLYDE THOMPSON, Chambersburg, Pa., R. 10.

PULLETS, BARRENS, 16 weeks and laying pullets, $1.50 and $2.00 each. Breeders, $1.75; Roosters, $1.
G. ROUTZAHN. ASPERS, PA.

POLAND CHINAS 15 well bred Poland China pigs for sale, 7 weeks old, $6 each.
GEO. W. MILLER, STEWARTSTOWN, PA.

COLLIES Perfectly mated sable and white puppies. Champion and imported stock. Farm raised.
MRS. HUGH BRINTON, WEST CHESTER, PA.

BUG DEATH

Gets rid of the bugs; does not kill everything else doing it.

THE SAFE INSECTICIDE

Non-injurious to plant, tree or vine, bird, bees or dumb animals

No Paris Green or Arsenic IN ITS COMPOSITION

Farmers using it praise it most. You will appreciate its results. Write for booklet.

BUG DEATH APHIS
Ideal For Fruit Trees

DANFORTH CHEMICAL CO. Leominster, Mass.

PLANTS
CABBAGE, TOMATO, PEPPER AND CELERY
ALL LEADING VARIETIES

Cabbage Plants $1.00 per 1000
Tomato Plants $1.50 per 1000
Pepper Plants $4.00 per 1000
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All Plants Packed Carefully in Moss

OROL LEDDEN, Sewell, N. J.
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Largest Grower of Vegetables Plants in N. J.

FOR SALE USED MACHINERY

24x40 Advance Rumely Thresher; 22 in. New Racine Thresher; 24 in. Case Thresher; 2[illegible] in. Greyhound Thresher; 28 in. Huber Thresher; 28 in. Case Thresher; 32 in. Case Thresher; 36-in. Rumely Thresher; [illegible] Flour City Gas Tractor; 12-25 Avery; 12 H [illegible] 15 H Case Steam Tractors; 18 H Pitts; 18 H and 15 H [illegible]; 20 H Case; 20 H Port Huron and Port Huron; many others. Write us for our complete used machinery list.

THE BANTING MFG. CO.
114 Superior Street, Toledo, Ohio

Cabbage Plants All the leading varieties strong plants from seed $1.25 per 1,000; $10.00 per 10,000.
Celery Plants 6 of the best kinds. Fine field grown plants, $1.25 per 1,000; $10.00 per 10,000.
I. C. SCHMIDT, BRISTOL, PA.

Lightning Rods EXCLUSIVE AGENCY AND QUICK SALES TO LIVE DEALERS SELLING "DIDDIE'S UNIVERSAL RODS." Our copper tests 99.96% PURE. WRITE FOR AGENCY. PRICES ARE RIGHT.
L. L. DIDDIE CO., MARSHFIELD, WIS.

WESTERN GRAIN GROWERS URGE WATER OUTLET

Use of ocean bound transports built on the Great Lakes, as a means of relieving the grain congestion in the big wheat growing states was urged upon the Interstate Commerce Commission today by Clifford Thorne, of Chicago, appearing in the interests of the American Farm Bureau Federation and the Farmers National Grain Dealers Association.

Facts were presented showing that the Government is building boats at the head of the Great Lakes and sending them thru Buffalo to the ocean to engage in the coast-wise traffic. Already fifty or more such transports have been built and others are under construction.

Each boat could carry the equivalent of a trainload of grain. It would cost approximately $5000 to equip each boat for grain handling but this would amount to only $50 per car even if the boat should make but the one trip. The saving in freight would cover this expense, and the big saving in freight cars thus released would go a long way toward helping out the present almost unbearable situation in grain growing sections.

In many sections much of the old grain crop is still stored in elevators and the harvest of the new crop is already under way. Congestion in middle western elevators caused by lack of freight cars has brought about a situation that must be relieved by the use of extraordinary remedies.

The U. S. Shipping Board and the Interstate Commerce Commission are said to look with favor upon the use of the lake-built boats in the manner suggested.

WHEAT PRODUCTION COST FOR 1919

The cost of producing wheat of the 1919 crop was as low as one dollar a bushel on just two farms out of 481 included in a cost of production study just completed by the U. S. Department of Agriculture. On 20 farms it was $5 or over. The bulk of the farms produced wheat at a cost somewhat less than midway between these two extremes. The average bushel cost for all farms was $2.15. At such a price, half the farmers in quarters would have lost money on their wheat.

"Necessary Price" Considerably Above Average Cost

Department specialists, in cost of production studies, point out in this connection that, for the farms covered in this investigation, the socalled "necessary price"—that is, the price necessary to give the producer a fair degree of certainty of making a profit—would be found at a level considerably above that of the average cost of production. For example, to allow a profit on 80 percent of the wheat produced on the farms covered by this study, the price would have to be about $2.60, as compared with an average cost of $2.15. At a price covering the average cost plus 10 percent, 75 percent of the crop would be covered, but 40 percent of the growers would still fail to break even.

EARLY CROPS REDUCED 23,000,000 ACRES

The shortage of farm labor and the unfavorable weather for planting have affected crop production in this country even more than was indicated by earlier estimates. The acreages of hay and barley will be about the same as they were last year but other crops will be reduced as follows—winter wheat 31 percent, beans 29 percent, rye 23 percent, spring wheat 16 percent, potatoes 5 percent, oats 3 percent. The total acreage, devoted to these eight crops will be as large as it was up to 1917 but will be less than it was last year by about 23,000,000 acres or 11 percent. While this is a large decrease it should be remembered that conditions are abnormal in that last year's winter wheat crop was planted before the armistice, and the shortages so far reported may be partially offset by increases in later planted crops such as corn and cotton. Then too, yields of small grains were low last year and with normal weather conditions from now on, the total pounds of wheat, oats, barley and rye produced in this country would be only about 4 percent less than was produced last year and 3 percent below the average of the previous five years.

FARM LOANS

During the month of May, 1920, an aggregate of $1,191,100 was loaned to 294 farmers of the U. S. by the Federal Land Banks on long-time first mortgages according to the monthly statements made to the Farm Loan Board.

During May 238 applications were received by the twelve banks, asking for $756,509, and during the same month 288 loans were approved by them amounting to $806,000.

On May 31, 1920, there were operating in the United States 3,983 Farm Loan Associations, and the total mortgage loans made by the Federal Land Banks thru these associations to 12,298 farmer-borrowers as of that date, amounted to $347,990,941. Deducting from this amount the loans paid off in full by borrowers, to wit: $10919,630 the grand total of loans in force as of May 31, 1920, $337,071,311 is distributed within the Federal Land Bank Districts.

MONEY LOANED TO ALLIES

The total advances made by the United States Government to its Allies down to November 15, 1919, as given in the annual report of the United States Treasury, were as follows:

United Kingdom	$4,220,000,000
Russia	188,000,000
France	2,985,000,000
Italy	1,611,000,000
Belgium	339,000,000
Serbia	27,000,000
Other allies	136,000,000
Total	$9,506,000,000

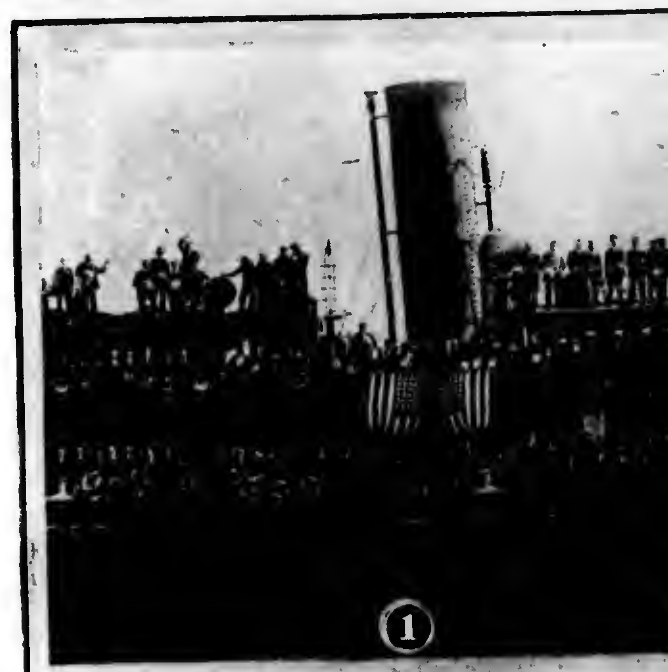
The advances were made against demand obligations bearing interest corresponding to the American loans from which they were provided.

THAT CUP OF COFFEE

The United States drank $99,000,000 worth of coffee in 1918 and $250,000,000 worth in 1919.

It costs Uncel Sam $20,000,000 to collect $3,850,150,000 in taxes last year. During the two and a half years of war taxation he has collected $11,481,190,000—as much as he collected in 55 years' total previous [illegible].

PASSING EVENTS IN PICTURES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(Photo Copyright by Underwood & Underwood

1—Survivors of Torpedoed "President Lincoln" drop Wreaths Overboard in Unique Memorial Services.

2—Arthur Maher, eight months old, one of Manhattan's perfect babies. His Mother is only Nineteen.

3—San Francisco Auditorium, Scene of Democratic Convention.

4—Cann of N. Y. University in action at the Inter-collegiate Meet at Franklin Field.

5—New York City Park Officials Listen to Lecture and Demonstration on Lime For Soil Treatment.

6—Made to Order Clothes Puzzle Miss Naldar Whose 37 inches are Reflected in the Mirror.

7—Bust of Roosevelt Revealing Features which Made Him Famous as Writer and Statesman.

8—Cattle Show Amidst Ruins of War-Swept Ypres, Belgium.

9—Captains of French and English Football Teams Kiss Before Game.

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This is one of the most desirable homes on the Eastern Shore—fine large barn built last season, and good 10 room house, with beautiful lawn and maple shade, 3 minutes' walk to steamboat wharf, stores and canneries, and 10 minutes' walk to center of town which includes high school, churches of all leading denominations, picture-house and all the advantages of a live town.

This farm has a water frontage and a beautiful view of town and country and has produced some of the best crops of corn, wheat and alfalfa that have been grown in the county. Owner is a Canadian, and high rate of exchange makes immediate sale necessary. For price and further particulars, apply R. F. D. No. 3, Box 12, DENTON, MD.

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Settlement of an estate requires immediate sale of 2 farms carrying investment of $25,000.00, 2½ miles from Liverpool, Perry County, Penna.; 32 miles north of Harrisburg; and 20 miles east of Sunbury, on State Highway; 2½ miles from railroad. Churches, schools, electric light, telephone, rural delivery. Both farms devoted to general farming, splendid opportunity for specializing in fruit, dairying and trucking. Farm No. 1 contains 226 acres, of which 112 acres are an island, level as a floor, in Susquehanna River. Buildings on shore. Can be bought for $8500.00—10% cash. Farm No. 2 has 120 acres, 40 of which are a virgin forest track with timber enough to pay for farm and build a new house. Price $7000.00—10% cash. Either or both farms the chance of a life-time. If interested, write for full particulars to S. H. Hart, 112 N. Beaver St., York, Pa.

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Everything goes for less than value buildings; settling estate near R. R. town, machine worked fields, spring-watered pasture, wood, apple, orchard; 7-room house nearly new, water, telephone, maple shade, new barn, silos, spring water; if taken now you get 7 cows, wagon, machinery, part growing crops, all for $3300, easy terms. Details page 39 Strout's Big Illustrated Catalog Farm Bargains around Philadelphia, in Penna., Del., Maryland, and 29 other states. Copy free. STROUT FARM AGENCY, 1122 B E, Land Title Bldg., Philadelphia.

For Sale— Immediate possession, 12 acre fruit and truck farm located 1 mile from Burlington City market, 10 acres tomatoes, 6 acres sugar corn, 2 acres cucumber, 1 acre lima beans, 40,000 cabbage plants, 2,000 egg plants, 7 acres new hay, apples, peaches, pears, strawberries. Price $12,000. Terms. C. J. Lame, Farm Agy., Inc., Burlington, N.J.

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LACE DRESSER SCARF

By JEANETTE BELL

Every housewife knows the value of attractive scarfs for the dresser, she also knows from experience that most dresser scarfs require frequent laundering and as a natural consequence, they soon wear out. A handsome lace will outwear those made by machine and again, one made exclusively of handsome lace will wear longer than those having a center of material and a lace edge. Of course, there is more work and time expended on this than on an edge but anything that is worthwhile having is worth the effort. If purchased at the shops, these scarfs bring the price of luxuries but this need not worry the crochetworker. Made of hard twisted Cordonnet crochet cotton, this elaborate scarf will afford dainty pickup work for any season of the year. These wheel medallions are made separately and joined together, so that one can have a hook and thread always handy and a few moments time can be utilized to good advantage in this manner.

The size of the thread is a matter of choice. Fine thread may be used, but naturally the medallions will be smaller and more rows will be required to make the size necessary. The scarf illustrated was made of No. 10 Cordonnet crochet cotton, 4 rows of 11 medallions each are required to make a scarf 18 by 54 inches, the average size for the dresser tops. This cotton makes a heavy scarf but one which is most effective over a dark, highly polished wooden surface. Finer threads make more lacey scarfs. The secret of the long life of this style of scarf, is that the dust brushes thru the lace and it does not become soiled as quickly as a woven material. The all white lace will harmonize with the other decorations of the room taking for granted that they are of dainty shades. If they are of dark shades of copenhagen blue or old rose, deep ecru thread makes a good contrast.

Start with 12 ch sts, join forming a circle.

1st row: make 24 s c into circle.

2nd row: * 7 ch sts, skip 4 sts, 1 s c into next st, 1 s c into next st, repeat *, forming 4 loops.

3rd row: * 7 ch sts, 1 s c into 2nd s c, 3 s c over portion of the loop of previous row, repeat *, 3 times.

4th row: * 7 ch sts, 1 s c into 2nd s c, 1 s c into next s c, 4 s c over portion of loop of previous row, repeat *, three times.

5th row: * 7 ch sts, 1 s c into 2nd s c, 1 s c into each of the next 4 s c, 3 s c over portion of loop, repeat *, three times.

6th row: * 7 ch sts, 1 s c into 2nd s c, 1 s c into each of the next 6 s c, 3 s c over portion of loop, repeat *, three times, continue in this manner, increasing 2 s c on each cluster of s c of the previous row, until you have completed the 12th row, when you have 20 s c together.

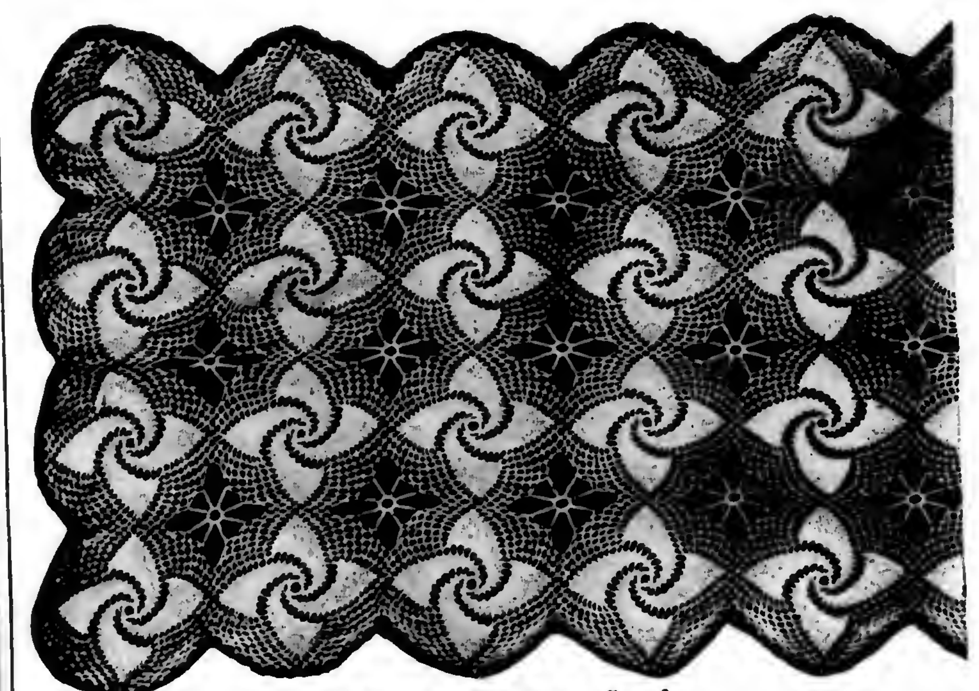
13th row: * 7 ch sts, 1 s c into center of loop of previous row, 7 ch sts, skip 1st s c, 1 s c into the next ts, 1 s c into each s c, omitting the last s c of cluster, repeat *, three times, continue in this matter, making 1 extra loop each time you decreased 2 s c, until you have but 2 s c, at the point, then make 1 row of loops, break thread. Completing a medallion.

If finer thread is is used make the wheels larger by making 15 rows of increased s c before starting to decrease. If still finer thread is used, start with 15 ch sts, and make five spokes to each wheel. To join two medallions, on the last row of the second medallion, make 3 ch sts, join to center of loop of first medallion, 3 ch sts, 1 s c into center of next loop of second medallion, continue joining 5 loops, break thread.

For the webs between the 4 medallions, make 12 ch sts, join forming a circle, 2 s c, 10 ch sts, 1 s c into center st of 2nd loop of 1st medallion, 10 ch sts, 2 s c into circle, 10 ch sts, skip 1 loop of medallion, 1 s c into center of next loop, 10 ch sts, continue in this manner until all the medallions are joined and the web has 16 lines of ch sts, break thread.

For the finishing edge around the four sides, make * 7 ch sts, catch back into the 4th st, forming 1 p, 3 ch sts, 1 s c into center of loop, repeat *, for the entire edge.

A smaller scarf to match, can be made for the chiffonier, dressing table, etc. A square of 16 medallions forms the cover for a side table to match.


Section of Dresser Scarf

EARNS MONEY WITH CANNED STUFF

How I Handle My Surplus Garden Truck

When I succeeded in having real early tomatoes I can get a fair price for them in a nearby city, but the price soon drops to a low level. So the question arose, how can I handle my surplus so that they will yield a fair profit? I solved the problem in this way: I invested $10 in a home canner holding 24 tin cans, size No. 3. It is the best investment I have made in a long time.

Just as soon as the price of tomatoes in my market drops to a low level I make ready my canning outfit, having previously bought 1,000 cans in early spring, so as to get them at the lowest figure. Early in the spring I can buy No. 3 cans at $30 per thousand, while if I wait till the busy canning season, I must pay $35 or more, and run the risk of not getting them when needed.

I can only the very best vegetables, for I wish to keep my reputation for high quality. I pack the can full of fine red tomatoes cut in halves and fill to within an inch of the top with tomato juice, not water. When soldering the lid, I do not let the contents of the can touch the lid, because this makes it difficult to seal the can properly.

I find it easy to dispose of my surplus garden truck put up in tin cans at a good profit. We sold all our surplus tomatoes, snap beans, and grapes at $1.44 per dozen, and we put up about 1,500 cans last season. We buy printed labels and paste them on the cans. At first we sold our surplus cans to merchants in nearby towns, accept trade for them. Now, however, we are selling to private parties in nearby towns, and on account of the high quality of vegetables we can plan on orders each year from the same parties I have already booked orders for tomatoes, peas, snap beans, and corn away ahead of my supply, but I shall buy what we cannot supply and hold my trade for the future. I also have booked for orders for strawberry, jam, blackberries, grapes and peaches. We promise a full can of ripe tomatoes put up in tomato juice, and we deliver the goods.—Mrs. Josephine Umoselle, Atlantic Co., N. J.

Perhaps you won't be using the sewing machine much until fall. Be sure it is clean and carefully covered if you expect it to be in good trim for use them.

STUDIES IN NUTRITION—12

By Pearl MacDonald, Penna. State College

Cereals and Grains

Corn Flour and Cornmeal.—Corn is made into flour to some extent, but mostly into meal. The germ and part of the fat are removed. Cornmeal mush is very wholesome if it has been long and thoroly cooked. Fried mush is not so desirable, because fried foods, due to the fat in which they are cooked and the crust-like coat which is formed in frying, are most difficult to digest. Fried foods should certainly be omitted from the diet of children.

Corn-meal muffins are less objectionable than other quick breads because the product is crumbly and there is not the doughy mass fre-

quently found in hot wheat rolls.

Corn-meal products, due to the nature of the corn, are laxative in effect, and for this reason are desirable in the diet.

Rice.—This cereal has less fiber, fat, mineral matter and protein, but more starch than the other grains. When thoroly cooked, rice is easily digested and very completely absorbed. It is in no way irritating to the digestive tract. For these reasons it is very desirable for children and for invalids. It may be served in a variety of ways—as a desert, a breakfast food, as a vegetable, in soups and other ways. It can in respect to starch content take the place of potatoes, therefore, both should not be served at the same meal. Rice, however, lacks the essential mineral matter afforded by potatoes, unless the brown rice is used. Rice with white sauce and grated cheese makes a well-balanced food combination.

Oat Foods.—Oats is little used in the form of flour. As a breakfast foot it comes on the market as oatmeal, and steel-cut oats and rolled oats. The latter is prepared by steam cooking, rolling and drying the grain.

Other Breakfast Cereals.—Some common forms of breakfast cereals are flakes, shredded and puffed varieties. To make the flakes the cooking process is continued longer than in the rolled grains. In the shredded form the grain is steam-cooked, stretched into shreds, piled in layers, then cut and roasted. In the puffed form the grain is put under pressure, and when the pressure is released the grains puff out.

Need of Breakfast Cereals.—Breakfast cereals have a very important place in the diet. They furnish protein, therefore when combined with milk, they make a diet nearly efficient for body needs. They furnish fuel in the form of starch, and are therefore a comparatively inexpensive source of body fuel. They are relatively inexpensive. They can be served in a variety of ways. Those that require cooking at home are less expensive than the ready-to-serve kinds. In preparing the latter for market the manufacturer has spent much time and labor, hence the increased cost.

For children home-cooked cereals are best. But occasionally for variety, especially for supper, they may have the ready-to-serve varieties.

Cooking Cereals.—They should all be well cooked. The amount of water required in preparing them for cooking varies somewhat with the cereal. Usually one cup of cereal per four cups water will answer. If you are cooking them in a fireless cooker the amount required will be slightly less, about three cups. If cereals like cornmeal and oatmeal and cream of wheat, etc., are stirred up in cold water, then set over the fire to get to cooking, they will not lump so much as when stirred into boiling water. They are best cooked in a can set in a water bath, as in a double boiler or in a fireless cooker.

Cornmeal and rolled oats and oatmeal should have the longest cooking, not less than three hours being sufficient to thoroly burst the starch cell walls so the starch grains can be easily worked upon by the saliva, which is the first step in digestion of starches, you will remember, one of the previous articles pointed out.

Recipes for Cooking Cereals

(Some good recipes will be given in the next article.)

IVY POISONING

I saw in a recent issue of your paper that sugar of lead solution should not be used for curing poisoning by ivy. I am an old woman now but when I was quite a young girl, I was out picking strawberries. I was barefooted, and somehow came in contact with poison ivy. My feet and legs to the knees became one solid mass of sores, or all one sore, from then until along in December, so that wearing any shoes or stockings was an impossibility. My people had used everything they knew or could hear of and had consulted one physician who prescribed for me, but nothing seemed to do any good. I suffered excruciatingly. The weather become very cold, and still I was obliged to go barefooted.

One day a physician called at our house, and asked "what ailed that girl's feet and legs." He said it looked like ivy poisoning, but why was it at that time of year. He was told, and then he said: "Why, that is the most simple and easy thing to cure." A teaspoonful of pulverized sugar of lead to one pint of water, and wash the affected parts several times a day and I would soon be well. And I was. Altho I since have picked berries right among ivy, I never have had the least symptom of poisoning Whether I had it in my system so long it made me immune I do not know, but I do know that the sugar of lead cured me, and did a quick, and thoro job.—Clarice Raymond.

FACTS FOR HOUSEWIVES

Place of Pickles in the Diet

If used in the right way pickles are an addition to the diet. Tho they are not good for children who can have any of the good foods recommended for children, such as orange juice, stewed fruit, cooked mashed vegetables and plenty of good bread, milk and cereal, they must not be entirely condemned for the children of the very poor, for the monotony of their diet is very unappetizing, and they refuse to eat a sufficient quantity unless stimulated by some appetizer. Tho fruit is best for this purpose, the pickle is much cheaper and when used sparingly it does no harm to the child who is old enough to eat at table.

As is the case with children, grown persons who have to be limited to a very plain diet find the pickle a cheap means of giving appetizing variety to the diet.

Persons who can afford plenty of variety and a liberal amount of fruit and vegetables do not need pickles in their bill of fare for they have no need of such acids or spices to stimulate their appetites. However, as far as possible it is advisable to cultivate a taste for the natural flavors of foods thru careful preparation rather than making them palatable by the addition of spices and vinegars.

MENDING BROKEN DISHES

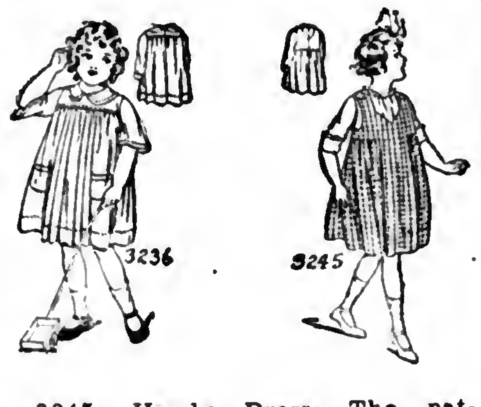
New tableware costs much money nowadays, and frugal housewives are giving more thought to mending broken plates, cups, saucers, bowls, etc., than they did when new pieces could be bought for a few cents. A clean break can be easily and securely mended.

Dishes that frequently go into hot water to be washed should be mended with waterproof cement. A cement that is soluble in water will not long hold the pieces together. Not all cements are waterproof by any means, altho very satisfactory for sticking things not to be subjected to too much moisture. Most waterproof cements are pyroxylin compounds. Pyroxylin is made of cotton. One would naturally suppose that a stickum made of animal matter such as hoofs, fish bones, etc., would be more water resisting than one made of fleecy cotton, but they are not.

PENNSYLVANIA FARMER PATTERNS

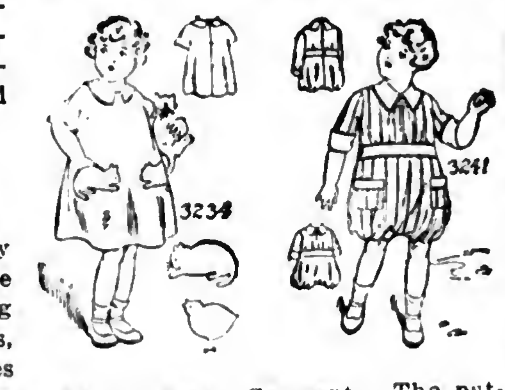
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

3236.—For Little Girl.—The pattern is cut in 5 sizes: 1, 2, 3, 4, and 5 years. A 2-year size will require 2⅛ yards of 36-inch material. Blue chambrey with feather stitching in white, was used for this dress. White batiste, voile or nainsook, finished with hem stitching, or insertion would also be pretty. Pattern, 10 cents.



3245.—Handy Dress.—The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. For a 6-year size, 1½ yard of 27-inch material will be required, for the guimpe, and 2⅜ yards for the dress. White and green checked gingham, with white lawn for the guimpe is cool and attractive. Pattern, 10 cents.

3234.—A New Play Apron.—The pattern is cut in 5 sizes: 1, 2, 3, 4, and 5 years. A 4-year size will require 1½ yard of 36-inch material. As illustrated, the apron is made of white cambric, with stitching in red cotton. The pockets are "cut out motifs,' finished and applied to the apron with stitching; the upper edge is left free to form the pocket opening. Pattern, 10 cents.



3241.—Play Garment.—The pattern is cut in 5 sizes: 1, 2, 3, 4 and 5 years. A 4-year size will require 2½ yards of 36-inch material. As here shown pink and white striped percale was used. Collar, cuffs, belt and pocket facings are of white cambric, edged with pink braid. Pattern, 10 cents.

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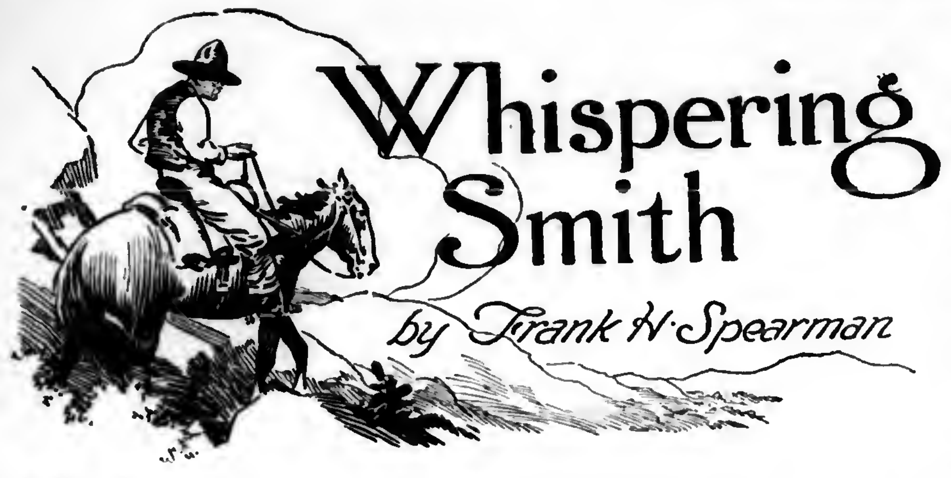


Whispering Smith

by Frank H. Spearman

SYNOPSIS OF PREVIOUS CHAPTERS

The wrecking of a heavy freight train at Smoky Creek had piled up dozens of box cars loaded with merchandise. The wrecking crew, lead by Sinclair the foreman, was at work clearing the tracks when McCloud, the superintendent, arrived. It had been the custom of Sinclair and his crew to appropriate whatever their fancy suggested from the goods carried by a wrecked train. They were now loading up a wagon when McCloud arrived and stopped the pilfering. At this, Sinclair became angry and because they would not agree to stop looting were discharged. Sinclair afterwards told Whispering Smith that his mistake was in not then killing McCloud. The only one injured in the wreck was a tramp who called for help and water but Sinclair would give neither. Dicksie Dunning, of the Crawling Stone Ranch, suddenly appears upon the scene and she and McCloud become acquainted. The adherents of Sinclair tried to have him reinstated, but Phil Hailey was appointed in his place. McCloud, who had been threatened, nearly had a clash with Sinclair in the boarding house, but this was prevented by the tact of Marion Sinclair, the proprietress.

(Continued from Last Week.)

CHAPTER XIII

The Turn in the Storm

The beginning of the Crawling Stone Line marked the first determined effort under President Bucks, while undertaking the reconstruction of the system for thru traffic, to develop the rich local territory tributary to the mountain division. New policies in construction dated from the same period. Glover, with an enormous capital staked for the new undertakings, gave orders to push the building every month in the year, and for the first time in mountain railroad-building winter was to be ignored. The older mountain men met the innovation as they met any departure from their traditions, with curiosity and distrust. On the other hand, the new and younger blood took hold with confidence, and when Glover called, "Yo, heave ho!" at headquarters, they bent themselves clear across the system for a hard pull together.

McCloud, resting the operating on the shoulders of his assistant Anderson, devoted himself wholly to forwarding the construction plans, and his first clash over winter road-building in the Rockies came with his own right-hand man, Mears. McCloud put in a switch below Piedmont, opened a material-yard, and began track-laying toward the lower Crawling Stone Valley, when Mears said it was time to stop work till spring. When McCloud told him he wanted track across the divide and into the lower valley by spring, Mears threw up his hands. But there was metal in the old man, and he was for orders all the time. He kept up a running fire of protests and forebodings about the danger of exposing men during the winter season, but stuck to his post. Glover sent along the men, and altho two out of every three deserted the day after they arrived, Mears kept a force in hand, and crowded the track up the new grade as fast as the ties and steel came in, working day in and day out with one eye on the clouds and one on the tie-line and hoping every day for orders to stop.

December slipped away to Christmas with the steel still going down and the disaffected element among the railroad men at Medicine Bend waiting for disaster. The spectacle of McCloud handling a flying column on the Crawling Stone work in the face of the most treacherous weather in the mountain year was one that brought out constant criticism of him among Sinclair's sympathizers and friends, and while McCloud laughed and pushed ahead on the work, they waited only for his discomfiture. Christmas Day found McCloud at the front, with men still very scarce, but Mears's gang at work and laying steel. The work train was in charge of Stevens, the freight conductor, who had been set back after the Smoky Creek wreck and was slowly climbing back to position. They were working in the usual way, with the flat cars ahead pushed by the engine, the caboose coupled to the tender being on the extreme hind end of the train.

At two o'clock on Christmas afternoon, when there was not a cloud in the sky, the horizon thickened in the east. Within thirty minutes the mountains from end to end of the sky-line were lost in the sweep of a coming wind, and at three o'clock snow struck the valley like a pall. Mears, greatly disturbed, ordered the men off the grade and into the caboose. McCloud had been inspecting culverts ahead, and had started for the train when the snow drove across the valley. It blotted the landscape from sight so fast that he was glad after an anxious five minutes to regain the ties and find himself safely with his men.

But when McCloud came in the men were bordering on a panic. Mears, with his two foremen, had gone ahead to hunt McCloud up, and had passed him in the storm; it was already impossible to see, or to hear an ordinary sound ten yards away. McCloud ordered the flat cars cut off the train and the engine whistle sounded at short intervals, and, taking Stevens, buttoned his reefer and started up the grade after the three trackmen. They fired their revolvers as they went on, but the storm tossed his signals on the ears of Mears and his companions from every quarter of the compass. McCloud was standing on the last tie and planning with his companion how best to keep the grade as the two advanced, when the engine signals suddenly changed. "Now that sounds like one of Bill Dancing's games," said McCloud to his companion. "What the deuce is it, Stevens?"

Stevens, who knew a little of every thing, recognized the signals in an instant and threw up his hands. "It's Morse code, Mr. McCloud, and they are in—Mears and the foremen—and us for the train as quick as the Lord will let us; that's what they're whistling."

"So much for an education, Stevens. Bully for you! Come on!"

They regained the flat cars and made their way back to the caboose and engine, which stood uncoupled. McCloud got into the cab with Dancing and Stevens. Mears, from the caboose ahead, signalled all in, and, with a whistling scream, the engine started to back the caboose to Piedmont. They had hardly more than got under full headway when a difficulty became apparent to the little group around the superintendent. They were riding an unballasted track and using such speed as they dared to escape from a situation that had become perilous. But the light caboose, packed like a sardine-box with men, was dancing a hornpipe on the rail-joints. McCloud felt the peril, and the lurching of the car could be seen in the jerk of the engine tender to which it was coupled. Apprehensive, he crawled back on the coal to watch the caboose himself, and stayed long enough to see that the rapidly drifting snow threatened to derail the outfit any minute. He got back to the cab and ordered a stop. "This won't do!" said he to Stevens and the engineman. "We can't back that caboose loaded with men thru this storm. We shall be off the track in five minutes."

"Try it slow," suggested Stevens.

"If we had the time," returned McCloud; "but the snow is drifting on us. We've got to make a run for it if we ever get back, and we must have the engine in front of that way car with her pilot headed for the drifts. Let's look at things."

Dancing and Stevens, followed by McCloud, dropped out of the gangway. Mears opened the caboose door and the four men went forward to inspect the track and the trucks. In the lee of the caboose a council was held. The roar of the wind was like the surge of many waters, and the snow had whitened into storm. They were ten miles from a habitation, and, but for the single track they were travelling, might as well have been a hundred miles so far as reaching a place of safety was concerned. They were without food, with a caboose packed with men on their hands, and they realized that their supply of fuel for either engine or caboose was perilously slender.

"Get your men ready with their tools, Pat," said McCloud to Mears.

"What are you going to do?"

"I'm going to turn the train around and put the nose of the engine into it."

"Turn the train around—why, yes, that would make it easy. I'd be glad to see it turned around. But where's your turntable, Mr. McCloud?" asked Mears.

"How are you going to turn your train around on a single track?" asked Stevens darkly.

"I'm going to turn the track around. I know about where we are, I think. There's a little stretch just beyond this curve where the grade is flush with the ground. Ask your engineman to run back very slowly and watch for the bell-rope. I'll ride on the front platform of the caboose till we get to where we want to go to work. Lose no time, Pat; tell your men it's now or never. If we are caught here we may stay till they carry us home, and the success of this little game depends on having everything ready and working quick."

Stevens, who stayed close to McCloud, pulled the cord within five minutes, and before the caboose had stopped the men were tumbling out of it. McCloud led Mears and his foreman up the track. They tramped a hundred yards back and forth, and, with steel tapes for safety lines, swung a hundred feet out on each side of the track to make sure of the ground. "This will do," announced McCloud; "you waited here half a day for steel a week ago; I know the ground. Break that joint, Pat." He pointed to the rail under his foot. "Pass ahead with the engine and car about a thousand feet," he said to conductor, "and when I give you a signal back up slow and look out for a thirty-degree curve—without any elevation, either. Get out all your men with lining-bars."

The engine and caboose faded in the blur of the blizzard as the break was made in the track. "Take those bars and divide your men into batches of ten with foremen that can make signs, if they can't talk English," directed McCloud. "Work lively now, and throw this track to the south!"

Pretty much everybody — Japs, Italians, and Greeks—understood the game they were playing. McCloud said afterward he would match his Piedmont hundred in making a movable Y against any two hundred experts Glover could pick; they had had the experience, he added, when the move meant their last counter in the game of mountain life or death. The Piedmont "hundred," to McCloud's mind, were after that day past masters in the art of track-shifting. Working in a driving cloud of grit and snow, the ignorant, the dull, and the slow rose to the occasion. Bill Dancing, Pat Mears and his foreman, and Stevens moved about in the driving snow like giants. The howling storm rang with the shouting of the foremen, the guttural cries of the Japs and the clank of the lining-bars as rail-length after rail-length of the heavy track was slued bodily from the grade alignment and swung around in a short curve to a right angle out on the open ground.

McCloud at last gave the awaited signal, and, with keen-eyed, anxious men watching every revolution of the cautious driving-wheels, the engine, hissing and pausing as the air-brakes went off and on, pushed the light caboose slowly out on the rough spur to its extreme end and stopped with the pilot facing the main track at right angles; but before it had reached its halting-place spike-mauls were ringing at the fish-plates where a moment before it had left the line on the curve. The track at that point was cut again, and under a long line of bars and a renewed shouting it was thrown gradually quite across the long gap in the main line, and the new joints in a very rough curve were made fast just as the engine, running now with its pilot ahead, steamed slowly around the new curve and without accident regained the regular grade. It was greeted by a screeching yell as the men climbed into the caboose, for the engine stood safely headed into the teeth of the storm for Piedmont. The ten miles to cover were now a matter of less than thirty minutes, and the construction train drew into the Piedmont yards just as the telegraph wires were hesting from headquarters with orders annulling freights, ordering ploughs on outgoing engines, and battening the division hatches for a grapple with a Christmas blizzard.

No man came back better pleased than Stevens. "That man is all right," said he to Mears, nodding his head toward McCloud, as they walked up from the caboose. "That's all I want to say. Some of these fellows have been a little shy about going out with him; they've hounded me for months about stepping over his way when Sinclair and his mugs struck. I reckon I played my hand about right."

CHAPTER XIV

The Quarrel

Spring found the construction of the valley line well advanced, and the grades nearing the lands of the Dunning ranch. Right-of-way men had been working for months with Lance Dunning, over the line, and McCloud had been called frequently into consultation to adjust the surveys to objections raised by Dicksie's cousin to the crossing of the ranch lands. Even when the proceedings had been closed, a strong current of discontent set from the managing head of the Stone Ranch. Rumors of Lance Dunning's dissatisfaction often reached the railroad people. Vague talk of an extensive irrigation scheme planned by Sinclair for the Crawling Stone Valley crept into the newspapers, and it was generally understood that Lance Dunning had expressed himself favorably to the enterprise.

Dicksie gave slight heed to matters as weighty as these. She spent much of her time on horseback, with Jim under the saddle; and in Medicine Bend, where she rode with frequency, Marion's shop became her favorite abiding-place. Dicksie ordered hats until Marion's conscience rose and she practically refused to supply any more. But the spirited controversy on this point, as on many others—Dicksie's haughtiness and Marion's restraint, quiet unmoved by any show of displeasure—ended always in drawing the two closer to each other.

At home Dicksie's fancies at that time ran to chickens, and crate after crate of thorobreds and clutch after clutch of eggs were brought over the pass from far-away countries. But the coyotes stole the chickens and kept the hens in such a state of excitement that they could not be got to sit effectively. Nest after nest Dicksie had the mortification of seeing deserted at critical moments and left to furred prowlers of the foothills and canyons. Once she had managed to shoot a particularly bold coyote, only to be overcome with remorse at seeing its death-struggle. She gained reputation with her cousin and the men, but was ever afterward assailed with the reflection that the poor fellow might have been providing for a hungry family. Housekeepings cares rested lightly on Dicksie. Puss had charge of the house, and her mistress concerned herself more with the setting of Jim's shoes than with the dust on the elk heads over the fireplace in the dining-room. Her Medicine Bend horseshoer stood in much greater awe of her than Puss did, because if he ever left a mistake on Jim's heels Dicksie could, and would, point it coldly out.

One March afternoon, coming home from Medicine Bend, she saw at some distance before her a party of men on horseback. She was riding a trail leading from the pass road that followed the hills, and the party was coming up the bridge road from the lower ranch. Dicksie had good eyes, and something unusual in the riding of the men was soon apparent to her. Losing and regaining sight of them at different turns in the trail, she made out, as she rode among the trees, that they were cowboys of her own ranch, and riding under evident excitement, about a strange horseman. She recognized in the escort Stormy Gorman, the ferocious foreman of the ranch, and Denison and Jim Baugh, two the most reckless of the men. These three carried rifles slung across their pommels, and in front of them rode the stranger.

Fragments of the breakfast-table talk of the morning came back to Dicksie's mind. The railroad graders were in the valley below the ranch, and she had heard her cousin say a good deal on a point she cared little about, as to where the railroad should cross the Stone Ranch. Approaching the fork of the two roads toward which she and the cowboys were riding, she checked her horse in the shade of a cotton-wood tree, and as the party rode up the draw she saw the horseman under surveillance. It was George McCloud.

Unluckily, as she caught a glimpse of him she was conscious that he was looking at her. She bent forward to hide a momentary confusion, spoke briskly to her horse, and rode out of sight. At Marion's she had carefully avoided him. Her precipitancy at their last meeting had seemed, on reflection, unfortunate. She felt that she must have appeared to him shockingly rude, and there was in her recalling of the scene an unconfessed impression that she had been to blame. Often when Marion spoke of him, which she did without the slightest reserve and with no reference as to whether Dicksie liked it or not, it had been in Dicksie's mind to bring up the subject of the disagreeable scene, hoping that Marion would suggest a way for making some kind of unembarrassing amends. But such opportunities had slipped away unimproved, and here was the new railroad superintendent, whom their bluff neighbor Sinclair never referred to other than as the college guy, being brought apparently as a prisoner to the Stone Ranch.

Busied with her thoughts, Dicksie rode slowly along the upper trails until a long detour brought her around the corrals and in at the back of the house. Throwing her lines to the ground, she alighted and thru the back porch door made her way unobserved to her room. From the office across the big hall she heard men's voices in dispute, and she slipped into the dining room, where she could hear and might see without being seen. The office was filled with cowboys. Lance Dunning, standing with a cigar in his hand and one leg thrown over a corner of the table, was facing McCloud, who stood before him with his hand on a chair. Lance was speaking as Dicksie looked into the room, and in curt tones: "My men were acting under my orders."

"You have no right to give such orders," McCloud said distinctly, "nor to detain me, nor to obstruct our free passage along the right of way you have agreed to convey to us under our survey."

"Darn your survey! I never had a plat of any such survey. I don't recognize any such survey. And if your right-of-way men had ever said a word about crossing the creek above the flume I never would have given you a right of way at all."

"There were never but two lines run below the creek; after you raised objection I ran them both, and both were above the flume."

"Well, you can't put a grade there. I and some of my neighbors are going to dam up that basin, and the irrigation laws will protect our rights."

"I certainly can't put a grade in below the flume, and you refuse to talk about our crossing above it."

"I certainly do."

"Why not let us cross where we are, and run a new level for your ditch that will put the flume higher up?"

"You will have to cross below the flume where it stands or you won't cross the ranch at all."

McCloud was silent for a moment. "I am using a supported grade there for eight miles to get over the hill within a three-tenths limit. I can't drop back there. We might as well not build at all if we can't hold our grade, whereas it would be very simple to run a new line of your ditch, and my engineers will do it for you without a dollar of expense to you, Mr. Dunning."

Lance Dunning waved his hand as an ultimatum. "Cross where I tell you to cross, or keep off the Stone Ranch. Is that English?"

"It certainly is. But in matter of fact we must cross on the survey agreed on in the contract for a right-of-way deed."

"I don't recognize any contract obtained under false representations."

"Do you accuse me of false representations?"

Lance Dunning flipped the ash from his cigar. "Who are you?"

"I am just a plain, every-day civil engineer, but you must not talk false representations in any contract drawn under my hand."

"I am talking facts. Whispering Smith may have rigged the joker—I don't know. Whoever rigged it, it has been rigged all right."

"Any charge against Whispering Smith is a charge against me. He is not here to defend himself, but he needs no defence. You have charged me already with misleading surveys. I was telephoned for this morning to come over to see why you had held up our work, and your men cover me with rifles while I am riding on a public road."

"You have been warned, or your men have, to keep off this ranch. Your man Stevens cut our wires this morning——"

"As he had a perfect right to do on our right of way."

"If you think so, stranger, go ahead again!"

"Oh, no! We won't have civil war—not right away, at least. And if you and your men have threatened and browbeaten me enough for today, I will go."

"Don't set foot on the Stone Ranch again, and don't send any men here to trespass, mark you!"

"I mark you perfectly. I did not set foot willingly on your ranch today. I was dragged on it. Where the men are grading now, they will finish their work."

"No, they won't."

"What, would you drive us off land you have already deeded?"

"The first man that cuts our wires or orders them cut where they were strung yesterday will get into trouble."

"Then don't string any wires on land that belongs to us, for they will certainly come down if you do."

Lance Dunning turned in a passion. "I'll put a bullet thru you if you touch a barb of Stone Ranch wire!"

Stormy Gorman jumped forward with his hand covering the grip of his six-shooter. "Yes, damn you, and I'll put another!"

"Cousin Lance!" Dicksie Dunning advanced swiftly into the room. "You are under our own roof, and you are wrong to talk in that way."

Her cousin stared at her. "Dicksie, this is no place for you!"

"It is when my cousin is in danger of forgetting he is a gentleman."

"You are interfering with what you know nothing about!" exclaimed Lance angrily.

"I know what is due to every one under this roof."

"Will you be good enough to leave this room?"

"Not, if there is to be any shooting or threats of shooting that involve my cousin."

"Dicksie, leav the room!"

There was a hush. The cowboys dropped back. Dicksie stood motionless. She gave no sign in her manner that she heard the words, but she looked very steadily at her cousin. "You forget yourself!" was all she said.

"I am master here!"

"Also my cousin," murmured Dicksie evenly.

'You don't understand this matter at all!" declared Lance Dunning vehemently.

"Nothing could justify your language."

"Do you think I am going to allow this railroad company to ruin this ranch while I am responsible here? You have no business interfering, I say!"

"I think I have."

"These matters are not of your affair!"

"Not of my affair?" The listeners stood riveted. McCloud felt himself swallowing, and took a step backward with an effort as Dicksie advanced. Her hair, loosened by her ride, spread low upon her head. She stood in her saddle habit, with her quirt still in hand. "Any affair that may lead my cousin into shooting is my affair. I make it mine. This is my father's roof. I neither know nor care anything about what led to this quarrel, but the quarrel is mine now. I will not allow my cousin to plunge into anything that may cost him his life or ruin it." She turned suddenly, and her eyes fell on McCloud. "I am not willing to leave either myself or my cousin in a false position. I regret especially that Mr. McCloud should be brought into so unpleasant a scene, because he has already suffered rudeness at my own hands——"

McCloud flushed. He raised his hand slightly.

"And I am very sorry for it," added Dicksie, before he could speak. Then, turning, she withdrew from the room.

"I am sure," said McCloud slowly, as he spoke again to her cousin, "there need be no serious controversy over the right-of-way matter, Mr. Dunning. I certainly shall not precipitate any. Suppose you give me a chance to ride over the ground with you again and let us see whether we can't arrive at some conclusion?"

But Lance was angry, and nursed his wrath a long time.

(Continued Next Week.)

MORE EGGSPERIENCED

City Scout: I suppose you hatch all these chickens yourself?

Farm Scout: Nope; we've got hens here to do that.

Teacher: Why is it that lightning never strikes twice in the same place?

Jimmie: Because after it hits once, the same place isn't there any more.

A discarded raincoat will furnish material for making an excellent bag for the swimming togs.

Markets

PHILADELPHIA PRODUCE

—June 28, 1920

There was a very active potato market here today, and prices were considerably higher than a week ago. Sixty odd cars were offered and soon cleaned up. Norfolk No. 1 stock sold here this morning at $11.75@12.25 per barrel with the culls at $5.50@6.50 per barrel. Eastern Shore branded No. 1s sold from $12@12.50 per barrel, while the unbranded sold at $11@12 per barrel. No. 2 Eastern Shore's sold at $6.50@8 per barrel and culls at $4@5.50. There are still a few N. C. potatoes arriving which sold today at $11@12 per barrel with the No. 2s at $5@7.50 per barrel. N. J. potatoes have made their appearance and this morning sold at $2.25@2.50 per ⅝ basket for the No. 1s, with No. 2s at $1.15@1.50 per ⅝-basket. Within the next few days N. J. potatoes should be coming along freely, and the potatoes from the southerly points will be more or less neglected.

Vegetables.—Nearby N. J. and Penn. asparagus continues in good demand when fancy at 30@50c per bunch, while the poor stock is not wanted and moves slowly at from 8@30c per bunch as to condition. The market is now being supplied with green and wax beans from N. J. the former selling today at $1.25@1.75 per ⅝ basket and the latter at $1.25@1.50 per ⅝ basket. Supplies of course will get heavier and these prices will no doubt be very much lower within the course of the next few days.

N. J. and Penn. are supplying all the beets necessary, altho a few are still coming from the Norfolk section, and sales are being made around 4@5c per bunch. Abundant supplies of carrots from these same states are selling at 3@5c per bunch. Altho a little cabbage is still coming from Norfolk and Eastern Shore sections, the N. J. and Penn. crops are ample to take care of the requirements, the Penn. stock is showing generally good quality and selling at $3.50@4.50 per barrel, and the N. J. at $1.10@1.25 per ⅝-basket. The only cauliflower on the market is Penn. grown which sells all the way from 5c up to 15@18c per head as to size.

A little N. J. and N. Y. celery has appeared and sold around $2 per bunch. Nearby Kale is a little firmer at $1@1.75 per barrel. N. J. lettuce is doing better when showing good quality, but poor continues to be dull, and sales are being made all the way from 50c@$2 per box. N. Y. lettuce is also on the market, one car selling today at 50c@$2.25 per box. N. J. onions are now ready to come forward and as it is reported that there is a big crop of them, low prices will no doubt be in order, today's sales ranging from 50@85c per ⅝ basket.

Parsley is lower and moving slowly at $2.50@3 per hamper. N. J. peas are showing very little change from last week, most sales being at 60@90c per basket with some extra fancy higher and some poor peas lower. Rhubarb is getting played out for this season and is rather slow at 3@4c per bunch mostly. Southern grown peppers are about 25@50c per crate higher at $1.75@2.50 per crate. Radishes are in light supply and showing little or no change at 1½@3c per bunch. Scallions are moving out steadily at 1@2c per bunch. Spinach is in light supply and higher when fancy with sales ranging all the way from $1@3 per barrel. Nearby white turinps are moving slowly at $4.75@5 per barrel, while Md. yellow rutabagas are in slow demand at $3.75@4 per barrel. Sweet potatoes are firm when fancy at $2.50@2.75 per ⅝ basket with the No. 2s ranging from $1.25@1.75 per basket. A little water-cress is still around and selling at 3c per bunch mostly.

Fruits.—The market is now being supplied with a large variety of fruits, nearly all of which are meeting a very firm and active market. This morning four cars of Southern peaches sold at $3@4.50 per crate on good peaches, while some poor ones sold at 50c@2 per crate. There were 21 cars of cantaloupes here, the western selling at $3.50@4.25 per crate.

A car of Delaware strawberries sold at 15@23 per quart, while N. J. ranged from 13@25c, and the Penn. sold all the way from 15c up to 38@40c per quart. Three cars of N. C. dewberries in poor condition brought only 10@15c per quart. Some Md dewberries showed better quality and sold at 12@22c per qt., while some very fine N. J. stock sold up to 30c per quart. Some N. J. huckleberries brought 35c per quart and some N. C. sold as low as 23c. N. J. raspberries are meeting quick sales at 12@16c per pint. Gooseberries are steady at 12@15c per quart. Sour cherries sell mostly at 9@12c per pound with fancy up to 14@16c per pound. Watermelons are in light supply and selling at $400 up to $750 per car.

Poultry.—Live poultry is ruling lower than a week ago. Fowls are lower at 37@39c per pound on fancy with fair to good at 35@36c per pound. Broiling chickens are also lower at 50@65c on best not leghorns, while the leghorn broilers only bring 42@52c per pound. Old ducks are also lower at 28@30c per pound. New Spring ducks are now on the market and selling at 35@38c per pound. The one exception to the decline in the poultry market is old roosters which are about 1 cent per pound higher at 24@26c per pound.

Eggs.—There has been no material change in the egg market during the past week, as prices have been held about steady from day to day at 44@44½c on Penn. and other nearby current receipts and firsts holding steady at 47c. The Western eggs are selling a little better than the nearby eggs at the present writing as the firsts are selling at 42@45c and the extra firsts at 48c. Seconds and poorer are quoted from 30@41 per doz.

LANCASTER PRODUCE

—June 28, 1920

Following last week's glut of strawberries which forced prices down as low as eight cents per box during the last hour of business, the berry market today made a phenomenal recovery and the majority of sales were made at twenty-five cents per box. The demand was brisk. Cherries which were first offered at 35 cents per box, steadily declined until they were moved at eighteen and twenty cents. New potato prices were firmly held despite an increased supply. The quotations:

Butter and Eggs.—Creamery butter, 75c per lb.; country butter, 70@75c per lb.; fresh eggs, 48@50c per doz.; duck eggs, 50c per doz.; goose eggs, 6@7c each.

Poultry.—Dressed old chickens, $2@2.50 each; dressed young chickens, $2.65@2.75 each.

Vegetables.—Rhubarb, 5c per bunch; new beans, 50c per hlf. peck; new peas, 40c per hf. peck; asparagus, 10c per bunch; cauliflower, 25@30c per head; lettuce, 10@20c per head; cabbage, 10@25c per head; sweet potatoes, 50c per hlf. pk.; old potatoes, $4.50 per bu.; do., 50@60c per hf. peck; new potatoes, 50c per hf. pk.; spinach, 15c per quarter peck.

Fruits.—Apples, 40@60c per hf. peck; strawberries, 25c per box; cherries, 18@20c per box; cantaloupes, 20@25c each.

YORK PRODUCE MARKETS

—June 28, 1920

Rather unusual conditions prevailed at the markets this week; an abundance of strawberries, more than for several years, and yet the price dropped to 10c per box. Shortage of sugar was probably the only cause. The crop was cut short on account of the early freezing and the dry weather, which caught most of the early plantings. County cabbage is becoming plenty, also a few lots of new potatoes are to be seen. Sour cherries are coming in large quanties. Eggs are slow at former prices.

Eggs.—42@45c per dozen.

Butter.—Country, 60@65c lb.; separator, 65@75c lb.; milk, 12c quart.

Poultry.—Hens, 30c lb.; dressed, 100 $2.50 each.

Vegetables.—Potatoes, old, 45@60c ½ pk, new, 50@60c ½ peck; cabbage, 15@25c hd.; lettuce, 5@15c hd.; beets, 5@6c bch.; onions, 5c bch.; radishes, 5c bch.; lima beans, 30@40c qt.; soup beans, 25@30c qt.; asparagus, 10@12c bch.; peas, 18@25c ½ pk; ham, 45@80c lb.; whole, 40@50c lb.

Fruit.—Apples, 40c ¼ pk.; strawberries, 12@20c bx.; cherries, sweet, 20@30c bx; sour, 15@18c box.

Retail Grain Market.—Wheat, $3.50; corn, $2.25; oats, $1.50; rye, $1.80; bran, $3.25 cwt.; middlings, $3.75 cwt.

Wholesale Grain Market.—Wheat, $2.90; corn, $2.03; oats, $1.25; rye, $1.75; bran, $60 per ton; middlings, $75 per ton.

BALTIMORE PRODUCE

—June 28, 1920

Butter.—Creamery, Western Separator, extras, 58@59c; do., firsts 56@57c; Western prints, ½-pound, extras, 59@60c; do., firsts, 57@58c; do., 1-pound, extras, 59@60c; do., firsts, 57@58c; nearby creamery, extras, 48@50c; do., 46@47c; dairy prints, Maryland, Pennsylvania and Virginia, extras, 43@44c; do., firsts, 42@43c; storepacked, firsts, 42@42½c.

Eggs—Loss Off—Western Maryland and Pensylvania nearby, firsts, 43c; Eastern Shore Maryland and Virginia firsts, 45c; Western (Ohio) firsts, 43c; West Virginia, firsts, 42@43c; Southern North Carolina, firsts 4@42c.

Live Poultry.—Chickens, spring, under 1½ pounds, pound, 60@63c; do., spring, 1¾ and 2 pounds, pound, 68c; do., old pound, over 4 pounds, 38c; do., small pound, 36@37c; do., white Leghorn hens, pound, 36@37c; do., young white Leghorns, pound, 45@50c; ducks, Muscovy and Mongrel, pound, 27@28c; do., white Pekins, pound, 28@30c; do., puddle pound, 4 pounds and over, 27@28c; do., small, poor, 25@26c; pigeons, pair, old, 45c; do., young, 45c.

PITTSBURGH PRODUCE

—June 28, 1920

Butter.—Prints, 62½@63c; Tubs, 62@62½c; Cooking, 45@48c; Ohio, 56@57c.

Cheese.—New York full cream, 33@35c; Wis. Swiss, 58@60c; do., 5-lb. brick, 35@36c; Swiss, 20 lb. block, 39@40c; Phila., cream, doz., $1.

Eggs.—Fresh select, 46@47c; Specials at mark, 43@44c. Current receipts, 40@41c; do., candled, 43@44c.

Vegetables.—Potatoes, North Car., bbl., $11.50@12; do., Eastern Shore, barrel, $12.50. Onions Texas Yellow, crt., $1@1.25; Cabbage, crate, $7@8; Lettuce, home-grown, box, 50c@$1. Turnips, bu., $2.25@2.50. Parsley, doz., 50c@$1. Radishes, doz., 25@30c; Beans wax and green ham per, $2@4. Carrots new doz., 50@65c; Rhubarb home grown bunch, 20@25c. Beets, new, dozen 75@90c. Spinach, home grown, bu., 50c@$1; Green peas, Cal., drum $3@3.50; Asparagus, Del., bunch, 30@40c; do., home grown 90c@$1.

Fruits.—Green apples, bushel, $1@4.50; strawberries, 32 qt. crt., $6@8; dewberries, crt., $8.50@9.

NEW YORK PRODUCE

—June 28, 1920

Butter.—Steady; receipts, 10,780 tubs. Creamery, higher than extras, 59¾@60c; extra (92 score), 58½@59c; first (88 to 91 score), 52½@58c; packing stock, current make, No. 1, 42@42½c.

Eggs.—Irregular; receipts, 28,976 cases. Fresh gathered, extra first, 46@48c; do., first, graded, 42@45c; do., ungraded, 41@43c; state, Pennsylvania and nearby western hennery, white, first to extra, 53@58c; do., brown, extras, 51@54c; do., gathered, brown and mixed colors, first to extra, 42@50c.

Cheese.—Firm; receipts, 9,200 boxes, State, whole-milk flats, current make, white and colored, specials, 27@28c; do., average run, 25½@26¼c; state, whole-milk twins, current make, specials, 26@27c; do., average run, 25½c; state, whole-milk twins, held, white and colored, specials, 27½@29c; do., average run, 26@27c.

Poultry.—Live and dressed, steady and unchanged.

Vegetables. — Asparagus, dozen green, $2@5.25; white, $1.25@4.25. Potatoes, Southern, $9@13. Beets, nearby 100 bunches, $5@7. Carrots, nearby, $6@8 100 bunches. Cucumbers, Jersey, basket, $4@7; J'y doz., $1@1.25; L. I., doz., $1@1.50; Cabbage, L. I., bbl., $3@3.50; J'y, bbl., $3.50@4.50. Endive, 25@50c. Kale, nearby, 75c@$1.25 barrel. Lettuce, state crate, 75c@$1.50 nearby, barrel, 75c$1.75. Peas, Jersey large, $1.50@2, small, $1@1.50. Parsley, 100 bches., $4@4.50. Radishes, nearby, 100 bunches, 50c@$1.50. Rhubarb, $3@6 per 100 bunches. Scallions, nearby, 100 bunches, $1@2. Spinach, nearby, barrel, 75c@$1.25. Turnips, white, new, $1.50@2.50. Rutabaga, new, bbl., $2@2.50.

PHILADELPHIA LIVESTOCK

—June 28, 1920

Receipts for the week ending June 26th, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Totals for week	2,380	7,667	10,176
Previous Week	2,603	9,291	8,116

Calves.—Receipts of calves were 2,960 head against 3,972 head previous week.

Beef Cattle.—Demand for steers and cows was active and the market was firm and higher; Veal of desirable quality sold fairly and ruled steady. Quotations: Steers, fair to good, $15.25@17.25; common to fair, $13.50@15.25; cows, dairy, good to choice, 10½@11½c; do., fair to good, 8½@10½c; bulls, 8@12½c; calves, extra to choice, $17.50@18; do., fair to good, $16@17; do., common, $10@12; do., heavy and rough, $7@10; Tennessee, $15@16; other southern, $8@12.

Sheep and Lambs.—Offerings of sheep were moderate and the market ruled steady with a fair demand. Spring lamb was firm and higher, but sheared lamb was more freely offered and easier with trade quiet. Quotations: Sheared sheep, wethers, extra, $10.75@11.25; do, good to choice, $8@9.50; do., medium, $7@8; do., common, $2.50@4; ewes, heavy, fat, $7.50@8.50; lambs, spring, choice, $18.25@18.75; sheared, choice, $11@13; do., medium grades, $9@11; do., culls and common, $6@8.50.

Hogs.—The market was firm and higher, due to stronger outside advices and a good demand. Quotations: Best western, $18@18.50; hogs, good, nearby, $16.50@17.

City Dressed Stock.—There was a good demand for steers and cows at firm prices. Other descriptions were generally firm with demand fair for desirable stock. Quotations: Steers, 27@30c; heifers, 25@28c; cows, choice, 22@25c; cows, light, 18@22c; calves, city dressed, choice, 27@29c; calves, country dressed, 24@26c; lambs, spring, choice, 17@25c; hogs, 23c.

NEW YORK HAY AND GRAIN

—June 28, 1920

Feed.—The market for mill feed was firm for prompt delivery as offers were of a limited volume. The demand for forward shipment, however, was again small and prices were easy as Western mills seemed to have more feed to offer.

Quotations: City feed, bran, $64; middlings, $66, in 100-pound sacks; red dog, $76, nominel, in 100-pound sacks; Western spring bran, $57; standard middlings, $62; flour middlings, $67; red dog, $73, all in 100-pound sacks, 30-day shipment. Oat feed, $42; rye middlings, $58; white hominy feed, $74, all in 100-pound sacks. Cottonseed oil meal, $72; linseed oil meal, $60, in 100-pound sacks.

Hay and Straw.—Invoices are heavier, trade is quiet and the market is averaging at least $1 per ton lower. No permits are being issued for 33d Street shed and Palmer's Dock, Brooklyn, but outside points are receiving liberal supplies and there is pressure to sell. Straw holding about steady and unchanged, with prices irregular according to location.

Hay—Large Bales—Timothy. — No. 1, $51@52; No. 2, $49@51; No. 3, $45@47; Shipping, $42@45; No. grade, 25@36; Clover, Mixed—Fancy, 49@51; No. 1, 44@47; No. 2, $40@43.

Straw. — Large Bales, No. 1, rye, $22@24; No. 1 oat, $22@25; No. 1 wheat, $18@20.

Wheat.—No. 2, red, $2.95. **Corn.**—No. 2 Yellow, $1.98¼. **Oats.**—All Whites, $1.33@1.35, ord. wh. cl., $1.34; fancy, wh. cl., $1.48. **Rye.**—$2.33¼. **Barley.**—Feeding, $1.55@1.60.

PHILADELPHIA HAY AND GRAIN

—June 28, 1920

Baled Hay and Straw.—Receipts, 48 tons of hay. There was very little stock arriving and market firm. Timothy hay, No. 1, none here; No. 2, $42@44; No. 3, $39@40; sample, $33@37; no grade, $28@32. Clover mixed hay, light mixed, $42@43; No. 1 mixed, $40@41; straw, No. 1 straight rye, $17@17.50; No. 2, do., $16@16.50; No. 1 wheat straw, $14.50@15; No. 2 do., $13.50@14; No. 1 oat straw, $14.50@15; No. 2 $13.50@14.

Bran.—Quiet and unchanged. We quote: Car lots, including sacks, soft winter bran, western, in 100-lb. sacks, per ton, $60.50@61; spring bran, in 100-lb. sacks, per ton, $59@60.

Corn.—No. 2 Yellow, $2@2.03.

Wheat.—No. 1 red winter, $2.88@2.95; No. 2, ditto, $2.85@2.90; No. 3, do., $2.82@2.87; No. 4, do., $2.78@2.83; No. 5, do., $2.74@2.79.

Oats.—No. 2 White, $1.32@1.33; No. 2, do., $1.31@1.32; No. 3, do., $1.30@1.31; No. 4, do., $1.28@1.29.

PITTSBURGH HAY AND GRAIN

—June 28, 1920

Notwithstanding the fact that billings in transit on hay are somewhat heavier, shippers of this commodity are being more liberally supplied with cars by the railroad companies, nevertheless, arrivals continue light and the demand is not as enthusiastic as it was some time ago.

Market, while lower, is steady but heavy receipts would undoubtedly cause an accumulation on account of the different embargoes in and out of the city. Straw receipts have increased while there is not much demand for any with the possible exception of good, long, oat straw which is readily placed. Oats show a slight improvement on account of the light receipts and a fairly good demand. The following prices can be realized.

No. 1 Timothy, $43@43.50; Standard Timothy, $41@42; No. 2 Timothy, $39@40; No. 1 Light Clover Mixed, $39@40; No. 3 Timothy, $36@38; No. 1 oat straw, $18@18.50; No. 2 Oat Straw, $17.50@18; No. 1 Wheat Straw, $17.50@18; No. 2 Wheat Straw, $17@17.50; No. 1 Rye Straw, $18@18.50; No. 2 Rye Straw, $17.50@18.

LIVESTOCK MARKETS

—June 28, 1920

LANCASTER, PA.

Cattle.—Receipts, 1,810; market fairly active; prices higher for choice animals, lower for lightweights; good to choice steers, $15.75@16.25; fair to good steers, $14@15.25; medium to fair steers, $13@14.25; common to medium steers, $11.50@12.15; smooth and fat bulls, $12@13; medium to good bulls, $10@12; common to medium bulls, $9@10; smooth and prime heifers, $12@13; common to medium heifers, $10.50@12; good to choice cows, $9@11; common to medium cows, $4@5; stock bulls, $9@10; good to prime calves, $17.50@18; common to medium calves, $14.50@15.

Hogs.—Receipts, 169; market quiet; prices lower; good to prime, $16@16.50; light to medium, $15.50@16; roughs, $10@12; stags to sows, $8.39.

PITTSBURGH, PA.

Cattle.—Higher; supply, 50 cars; prime, $16.50@17.50.

Sheep.—Higher, supply, 10 cars; prime wethers, $10@10.25; culls and common, $3@5.50; lambs, $12@17.

Veal Calves—$15@17.

Hogs.—Higher; supply, 40 decks; prime heavies, $16.25@16.50; mediums and heavy yorkers, $17.40@17.90; light yorkers, $16@16.50; pigs, $15@15.50; roughs, $11@13.25.

PHILADELPHIA DAIRY MARKET

—June 28, 1920

Butter.—Receipts, 3,922 tubs. The market was firm, but without quotable change. As usual on Saturday, wholesale buyers manifested no interest of any account. We quote: Fresh solid-packed creamery, high-scoring goods, 60@62c, the latter for jobbing sales; extras, 59c; do., extra firsts, 56@58c; firsts, 51@55c; seconds, 45@50c; sweet creamery choice to fancy, 61@63c; fair to good, 51@60c; packed, as to quality, 44@46c; packing stock, 38@41c; fancy brands of nearby prints were jobbing at 68@70c; good to choice, 60@67c; fair, 57@59c.

Cheese.—Quiet, but steadily held. New York whole-milk flats, fancy, 28@29c; specials higher; ordinary to good, 23@27c; current make, best, flats, 27c; common to fair, 23@26c; Longhorns, 27@28c; single Daisies, 28@29c; jobbing sales of fancy held goods, 30@31c.

THE MILK MARKET

—June 28, 1920

Cool rainy weather in the early part of the week hurt the demand and altho manufacturers of condensed milk are buying more freely, surplus was heavy. Market closed more active. The July rate in 200 mile is $2.95 per 100 lbs. for 3 percent milk; 3.6 percent milk is $3.19 and 4 percent milk $3.35.

Receipts of milk and cream in 40-quart cans for the week ending June 26th, 1920, were as follows:

Railroad	Milk	Cream
Erie	39,214	4,810
Susquehanna	8,870	152
West Shore	15,123	2,375
Lackawanna	60,125	2,272
N. Y. Central (long haul)	196,771	5,872
Ontario	46,890	1,786
Lehigh Valley	66,178	3,567
New Haven	6,750	75
Pennsylvania	12,429	506
Other Sources	6,000	225
Totals	458,349	21,640
Same week last year	404,234	20,151

MOLINE

The Universal Tractor

800 owners in 43 counties in Iowa hundreds of owners in 37 states

report a saving of one man and four to five horses per farm by using the Moline System of Power Farming. As a result of actual figures kept by owners, $700 to $2200 profit a year is being reported daily.

The Moline Tractor will do for you what it has done for others. It does two big things to increase profits—

- —Increases production.
- —Decreases the cost of production.

Increases production by enabling one man to plow more, harrow more, seed more, cultivate more, mow more, harvest more, than possible under other methods.

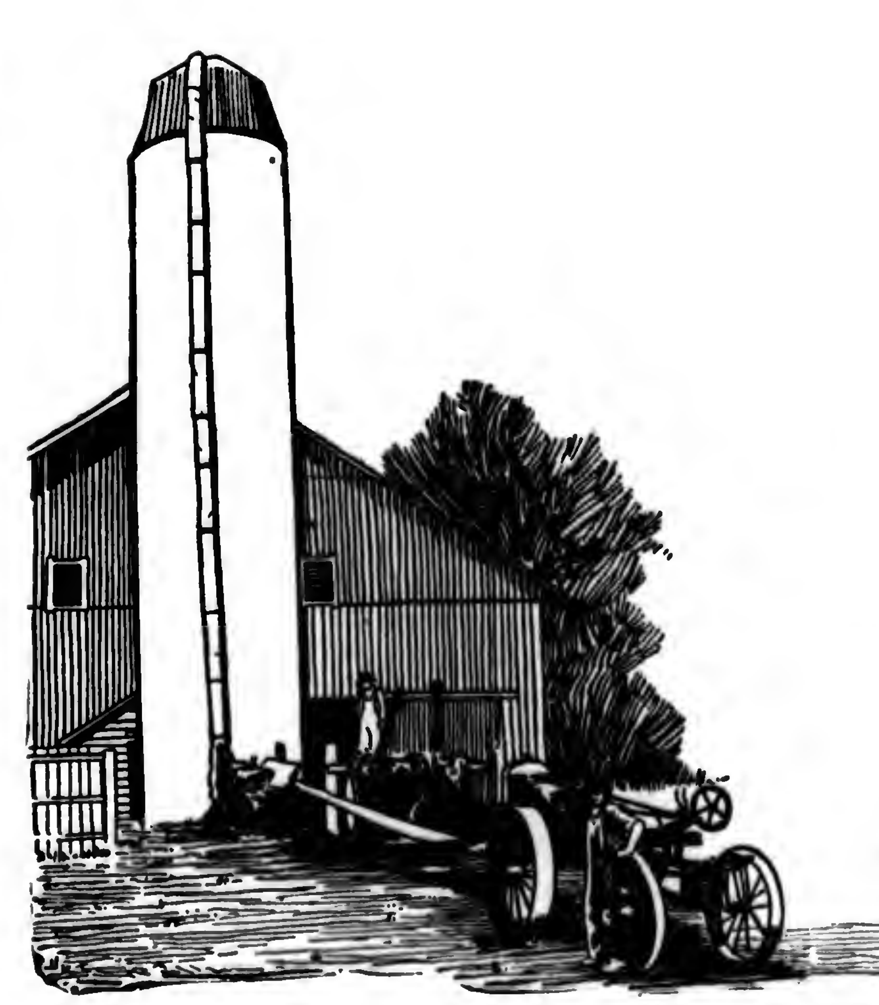
Decreases the cost of production by—

- —Saving help because it increases production per man.
- —Saving horses because it does all field work, including cultivation.

Thus the profit from the Moline Tractor is two-fold—it increases income and decreases expenses.

There is another phase of great importance aside from its money-making ability. The Moline Tractor makes farming more enjoyable—98 per cent of owners who have reported to us say so. It puts more speed into and makes easier many operations that have been drudgery.

The Moline Tractor is a powerful factor in keeping the boys on the farm.



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Facts in BLACK & WHITE

Realization of Profit Meets Expectation with Holsteins

The increase in production that could be expected by using a purebred Holstein-Friesian sire is well brought out in the summary of Bulletin No. 165 of the Iowa Agricultural Experiment Station, in which is stated: "The average of all the records made by first generation heifers by a purebred Holstein sire show an increase of 2,314.5 lbs. or 71 percent in milk and 67.15 lbs. or 24 percent in fat, at an average age of three and one-half years, over the record of their scrub dams at an average age of six years."

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registered in the Herd Books of the Holstein Friesian Association of America. Herd sire out of world's record senior four-year-old.
KEYSTONE BEAUTY PLUM JOHANNA No. 181646
At 4-10-20, 365 days—25787.5 milk; (4.02%) 1294.7 butter
At 3-3-23, 365 days—22496.6 milk; (3.94%) 1108.9 butter
2 years under full age—48284.1 milk; 2403.6 butter. The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year.
Bull calves $100.00 and up. GEORGE E. STEVENSON & SONS, Clarks Summit, Pa.

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150 reg. cattle, 20 reg. bulls, 100 high grades, a carload of any age that you may want. Holstein heifer calves $20 each express paid in lots of 5. Over 2,000 satisfied customers will send list in your states for reference of square dealing at SPOT FARM.
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High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.
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We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred, healthy bulls, from a clean, Tuberculin Tested Herd at reasonable prices. King of the May—Dolly Dimple—Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees.
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Registered Berkshires Big type service boars from litters farrowed in Sept. and Oct. 1919. Four grandsons of Epochal's Progress, sired by a son of Matchless Lee 8th. One grandson of Old Forge Successor, sired by Maybelle's Baron Duke. Three grandsons of Superior Emblem, sired by Winona Lee Champion 6th. Here are eight extra good young boars. Good enough to head any herd.
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King Korndyke Sadie Vale Jr., No. 20301, two nearest dams averaging 36 pounds of butter in 7 days, heads my herd. Butter records from 17 pounds two-year-olds to 34 pounds at full age. Also high grade Holstein calves, either sex, $20.00 each. Write your wants. PAUL H. STEVENS, Prop.

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Of extra good breeding and a splendid individual. A sure breeder and throws nice large calves. 2 yrs. 1 mo. old. Both parents in the A. R. class. Descendant of "Pride of Place," "Viola Rose," etc. Details upon request. Price $225.
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We will give the Use of a Finely Bred
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for 3 years to any responsible farmer. Write for our plan. Mugget Hill Farm, Charlton, Mass

Nine Reg. Guernsey Bulls, 1 to 10 mo. old, Sires Langwater Foremost, Glen Gable Friendship, 3 sired by son of Glenwood's Buttercup, 769 lbs. fat at 3 years. H. B. SHENK, ELVERSON, PA.

HOLSTEIN FRIESIAN HEIFER AND BULL CALVES Purebred registered and high-grade. Price $20 up. Splendid individuals and breeding. Write us your requirements. BROWNCROFT FARMS, McGraw, N. Y.

Reg. Holstein Bulls from calves to serviceable age. Herd tuberculin tested under Federal and State supervision. BONNYMEADS Farms, Harrisburg, Pa. R. 1

Ayrshire Bull and heifer calves for sale; or will exchange for good pigs.
WM. J. W. BECHTEL, Bechtelsville, Pa.

MILKING SHORTHORN BULL CALVES of the best breeding. Also a few females for sale.
C. M. KENNEDY & SONS, ULSTER, PA.

Brown Swiss Pure Bred Bulls for sale. Fine as silk. Come and see them.
G. EUGENE BOWN, FORKSVILLE, PA

HOG CHOLERA FIGHT REQUIRES VIGILANCE

The eradication of hog cholera is largely a matter of education, and depends to a great extent upon the cooperation given by state agencies, livestock producers and dealers and practicing veterinarians, say the specialists who are fighting the disease. A great deal has already been accomplished, they point out, and the overcoming of prejudice against the use of serum has marked a distinct step forward.

Some of the things which are handicapping the work are the neglect on the part of owners to clean and disinfect infected premises; the promiscuous use of hog cholera virus in the treatment of the disease by irresponsible or incompetent individuals; the failure of some farmers and officials to observe closely prescribed methods to prevent the introduction and spread of infection; the lack of restrictions in the traffic in infected animals; the improper disposal of hogs that die of cholera; and the sale, purchase and transportation of cholera-infected hogs by unscrupulous dealers.

The producer needs to observe only a few simple rules of precaution to be distinctly helpful in the campaign. He should see that infected premises are quarantined, sick hogs and newly purchased stock isolated, cholera-stricken ones burned, and swine quarters thoroly cleaned and disinfected.

The experience of many farmers has shown that a few days each year of scraping, cleaning and disinfecting will accomplish a great deal, and that the use of serum in time may save a whole herd.

Constant vigilance is the price of cholera-free hogs, the specialists emphasize.

CLEAN CARS PREVENTS DISEASE SPREAD

The cleaning and disinfection of railroad stock cars is an important means of preventing the spread of infectious diseases of live stock. In connection with Federal control over the interstate transportation of live stock, it is required that all such cars or other vehicles which have contained animals affected with a communicable disease such as tick fever, scabies of sheep and cattle, hogs cholera, etc., be cleaned and disinfected before being again used in interstate commerce.

All live stock received at public stock-yards or at official slaughtering establishments are inspected at the time they are received by employees of the Bureau of Animal Industry. If any animals are found to be affected with a communicable disease the carrier which brought them to their destination is at once notified to have the car or other vehicle set aside and thoroly cleaned. After that has been accomplished, it is disinfected under the personal supervision of a Federal employee.

Various States also have regulations requiring that cars must be cleaned and disinfected before being used in the transportation of certain classes of live stock. The Bureau of Animal Industry cooperates with such states by having its employees at central markets supervise the cleaning and disinfection of cars in compliance with the requirements of the state to which any stock may be destined.

An idea of the magnitude of this work may be gathered from the fact that during the fiscal year ended June 30, 1919, bureau employees personally supervised the disinfection of 44,843 cars. In addition, a large number of motor trucks were handled in the same manner.

BRADFORD COUNTY MILKING SHORTHORN BREEDERS SALE REPORT

The second Annual Sale of Milking Shorthorns offered by the breeders of Bradford County, Pennsylvania was held June 12th at Troy according to schedule. There was an attendance of about twelve hundred people and lively building was very much in evidence. The sale started off on schedule time with Geo. A. Bain of Lexington, Ky., and Geo. W. Baxter of Elmiar, N. Y., as auctioneers.

There were ninety-seven head sold in exactly five hours time, the total receipts of the sale being $62,355.00. The top price was $3150.00, which was paid for Glenside Minnie Clay, a yearling heifer consigned by L. D. May. This is a record price for an animal of that age at public auction. Cleveland Brothers of Mansfield sold five head for $8200.00. They were all sired by Royal Cranford. Several young bulls were sold at reasonable prices.

Among the principals buyers were E. M. Bull of Washingtonville, N. Y., Donald Woodward, LeRoy, N. Y. H. E. Tener, Washingtonville, N. Y., a delegation of breeders from Mifflin County, Pa., bought several calves for calf clubs as well as bulls and older females, and several extensive buyers from Ohio, New Jersey, Massachusetts, and Vermont.

Plans are already started for next year's sale.

WOOL INDUSTRY RECEIVES SUPPORT OF FEDERAL RESERVE BOARD

The Federal Rserve Board has restored confidence in the wool industry by suggesting a plan for financing the wool growers during the present emergency by the following authorized statement: "A wool grower may ship his wool to one of the usual points of distribution, obtaining from the railroad a bill of lading for the shipment; the grower may then draw a draft against his bank, for such an amount as may be agreed upon by the grower and the bank, secured by the bill of lading. The Federal Reserve Act authorizes any member bank to accept a draft secured in this manner at the time of acceptance, provided that the draft matures in not more than six months from the time of acceptance. After acceptance such a draft bearing the endorsement of a member bank is eligible for rediscount or purchase by a Federal Reserve Bank, provided that it has a maturity of not more than three months from the date of rediscount, or purchase."

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Poultry

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BIG STURDY BABY CHICKS June 7th, 14th, 21, 28th
Martin's White Wyandottes $25.00 per 100, Ringlet or Parks Barred Rocks, Famous Anconas, Quality S. C. Reds $22.00 per 100. Eglantine S. C. White Leghorns $18.00 per 100. 25 and 50 lots, same price per chick. Order from this add.
SUNNYSIDE POULTRY FARM, Copper Hill, N. J.

ORDER LEADER'S CHICKS NOW.
White Leghorns, $16 per 100. Barred Rocks, $18 per 100. Safe delivery and full count by parcel post prepaid guaranteed. These chicks are bred from hens with profit paying qualities including quick maturity fixed in them by years of breeding for that purpose. Ready for shipment May 25, June 2, June 14. Cash with order. No order accepted for less than 100.
LEADER'S POULTRY FARM, R2, York, Pa.

Hummer's Famous Chicks. Large, healthy and strong. Bar. Rock per 100, $18; 50, $9.50; R. I. Reds 100, $19.50; 50, $10; S. C. B. Leghorns 100, $17; 50, $9; S. C. White Leghorns 100, $13.50; 500, $65; Anconas 100, $31; 50, $16. Prompt delivery each week, prepaid, live arrival.
E. R. HUMMER & CO., Frenchtown, N. J.

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Reds, Rocks, Leghorns, Minorcas and Broilers at rock bottom prices by Parcel Post. Prepaid and safe delivery guaranteed. Our 11th year. Catalog free.
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COCKERELS: Barron 300 Egg Strain S. C. White Leghorn 16 wks. old husky purebred cockerels. Sired by prepotent males, out of extra high producing hens. A fine chance to improve your flock at small cost. Carefully crated, $5 each, express prepaid.
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Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
SELBY PRODUCE CO., PHILADELPHIA

TIFFANY'S SUPERIOR
CHIX Wyandottes, Reds, Rocks & Leghorns. Pekin, Rouen and Runner Ducklings. DUX
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Baby Chix at special low summer prices, for July, Aug. and Sept. Write for free catalog and price list.
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That Lay and Pay Beautiful Buff Rocks. Vigorous and prolific. Eggs, $1.50 for 15, balance of season.
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SHIREY'S S. C. White Leghorn Baby Chicks 14c and up according to season. They make the greatest egg producers on earth. C. P. Shirey, Stewartstown, Pa.

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Sore Shoulders.—One of our work horses has a raw sore on shoulder which I have been unable to heal. Have changed collars, but this failed to help him. What had I better apply? There is no bunch; it is a surface sore. H. J. P., Pikes Creek, Pa. —First of all, the collar should fit. It should not be long, too wide or too narrow; furthermore, it must be kept clean. Apply peroxide or hydrogen to remove pus. Then apply one part powdered alum, four parts oxide or zinc and five parts boric acid 2 or 3 times a day. If you can give this horse a few days rest, his shoulder will heal rapidly, but of course if the cause is not removed it will be some time before it will heal.

Sprained Tendon.—Our 4-year-old mare sprained left fore leg some two weeks ago. Since then she limps when trotted, but if allowed to walk it is scarcely noticeable. The cords between knee and ankle are thickened and when pinched, she pulls away as if suffering pain. I have showered her leg with cold water and thought it did her good. M. K., Porters Lake, Pa.—Don't drive her faster than a walk. If you can spare her, give her rest for ten days. Apply equal parts turpentine, aqua ammonia and raw linseed oil to swollen tendon once a day.

Bloody Milk.—Our cow seems to be in good, healthy condition in every way. She came fresh March 1st. She is fed mixed hay, shorts and bran 3 times a day. She has access to all kinds of grass and weeds. Her milk is bloody and if allowed to stand it changes color. At bottom it is almost red. She is a very heavy milker. A. F. S., Hammonton, N. J. —A little blood in the milk will do no particular harm. Blood may escape with the milk when the udder has been injured by blows; also, when it is congested or inflamed, or when the circulation of blood thru it has been suddenly increased by richer and more abundant food, or when the cow is in heat. The milk frothing up and assuming a pink tinge is often the first symptom of red water, and it may result from eating acrid or irritant plants. Tumors in the udder and rough milking are causes of bloody milk. In milk which becomes red after it is drawn it may be due to the presence in it of the Micrococcus prodigiosus. This also grows on bread. The writer has stated a few of the causes, now you can perhaps remove the exciting cause and she will soon get well.

Worms in Hogs.—I have a bunch of shoats, some of them pass worms, but these pigs seem to be thrifty and growing. W. J. A., Nottingham, Pa. —Kindly understand that every hog harbors a few worms, some hogs far too many for their own good, but when a pig is thriving it is not always necessary to dope him for worms. If you care to treat them yourself, give each 100-lb. hog 2½ grains Santonin, 1 grain calomel and one dram of powdered areca nut twice a week for two weeks. The pigs should fast for 24 hours before giving this remedy to them, but give them all the water they care to drink.

Feline Distemper.—We have two cats that will not lay on flesh. Last fall when I got them they were thin and have remained in this condition ever since. They have sore eyes and snuffle, sometimes cough, but always have good appetite. I feed them new milk twice a day, and food from our table. C. W., Stewartstown, Pa.—Your cats have not fully recovered from Feline Distemper. Give each cat ¼ grain of Sulphate of Quinine at a dose twice a day. If you believe they have worms give them a worm remedy. Feed them more meat and fish.

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Starting the Dairy Calf

How to Care for the Mother and Treat the Youngster—By H. W. Baldwin

With the present scarcity and high prices of good dairy cows, the question of raising the heifer calf to take her place in the producing herd becomes of greater importance than heretofore. The calf to be raised should by all means be a pure bred if possible, otherwise a high grade. The price of feed and labor is far too high to expend it on scrub individuals,—scrubs not only from the standpoint of ancestry, but in production as well. Altho a pedigree does not make a producer, in the majority of cases the calf with a pedigree will be a better producer than one without, because the pedigree represents a long line of careful selective breeding, during which the ability to produce has been of first importance.

The care of the calf really begins a number of weeks before it is born. The dam should be dried off about four or six weeks before she is due to freshen in order that she may have a rest, to build up her body in case she is in poor flesh as the result of a long milking period, and otherwise to prepare herself for the duty that lies before her. The cow should be in good flesh because it is thru her that we feed the unborn calf.

However, care should be taken not to get the cow too fat, as this may cause trouble. She should receive exercise each day as this is conducive to good condition. A ration should be fed which has a cool, laxative effect upon the digestive system. Ground oats, bran and linseed oil meal are feeds which are probably superior to any others for this purpose. If the cow freshens during the winter, she should be generously supplied with silage and a good legume hay. As the time for calving approaches, the ration should be gradually reduced, until at calving time she is fed very lightly on a laxative ration. All the water given the cow should be luke warm, as this tends to make retention of the afterbirth less likely. A few days previous to calving the cow should be placed in a large, clean, light and well ventilated box stall, and supplied with plenty of bedding. The two or possibly three feeds just previous to calving should be warm bran mashes. If the cow is in a good laxative condition at this time, there is less danger of trouble.

It is a good plan if possible to be with the cow during calving, in order to give any assistance that may be necessary. This is especially true with heifers that are experiencing their first calving. A little attention at the right moment may not only save a valuable calf, but a promising heifer as well. The feed given the cow after calving should be a continuation of the warm bran mashes. After one or two days, if everything is going well, the calving ration may be gradually replaced by the milk making ration. This change must be made gradually, as it is a very easy matter to throw the cow off feed, thereby giving her a setback which can be remedied only with difficulty, if at all. The grain ration for the first week should not exceed six or seven pounds, per day and should be increased at the rate of one half pound per day, after the cow has resumed her normal condition. This increase should be continued until the cow is producing her maximum flow of milk. Usually, after the calf is dropped the cow will give it the care and attention necessary. But it is well to be sure that the calf has started breathing properly, and that the nostrils are free from any obstruction, such as part of a membrane which may have become lodged there during the act of calving.

In order to prevent navel infection, and resultant complications, the navel should be disinfected immediately after birth. An iodine solution or a solution of carbolic acid is excellent for this purpose. This not only prevents navel infection, but also prevents infection from white scours, which is a highly contagious and usually fatal disease with newborn calves.

The length of time the calf is left with the cow varies with many individuals. Some recommend leaving the calf with the cow for two or three days, while others recommend taking it away immediately, and convincing arguments are advanced on both sides. But this is purely an individual question, and can best be settled by conditions that are present. Whichever method is followed, however, it is very important that the calf receive the first milk secreted by the dam, and which is known as colostrum. This is a food provided for the calf by nature, and contains certain properties which make it essential that the calf be not deprived of it. It is very laxative and high in albumen and ash, and has a stimulating effect upon the digestive system.

Well-Bred Calves Are a Source of Pride as Well as Profit

The first important step the calf takes on its journey thru life, is the time it is taught to drink. This is a comparatively easy thing to teach the calf, but requires more or less patience. It can be more easily accomplished by allowing the calf to get hungry before its first lesson. Some calves will learn very quickly, while others will require a much longer time. The length of time to feed whole milk depends to a large extent upon the value of the calf, and the price received for the milk or its product. Feeding whole milk for four or six weeks, will generally insure a good start. But of course the longer the calf can be fed whole milk, the better will be the start it receives, and a good start is half the battle. The amount to feed depends largely upon the size and vigor of the calf, but should be between six and twelve pounds per day, and distributed thru three feeds. Be sure that all utensils used in feeding are thoroly washed and scalded after using. This is just as important with the calf pails as with the milk pails. Be regular with the feeding and with the amounts fed. If possible, feed the milk while it is still warm from the cow. If the milk becomes cold, it should be warmed before being fed.

Attention paid to these few fundamentals will do a great deal to insure success with calves. The calf should be fed three times a day until it is two or three weeks old, after which it may be reduced to two. A milk scale or quart measure should always be used in measuring the amount fed, and any increase should be made gradually. It is poor

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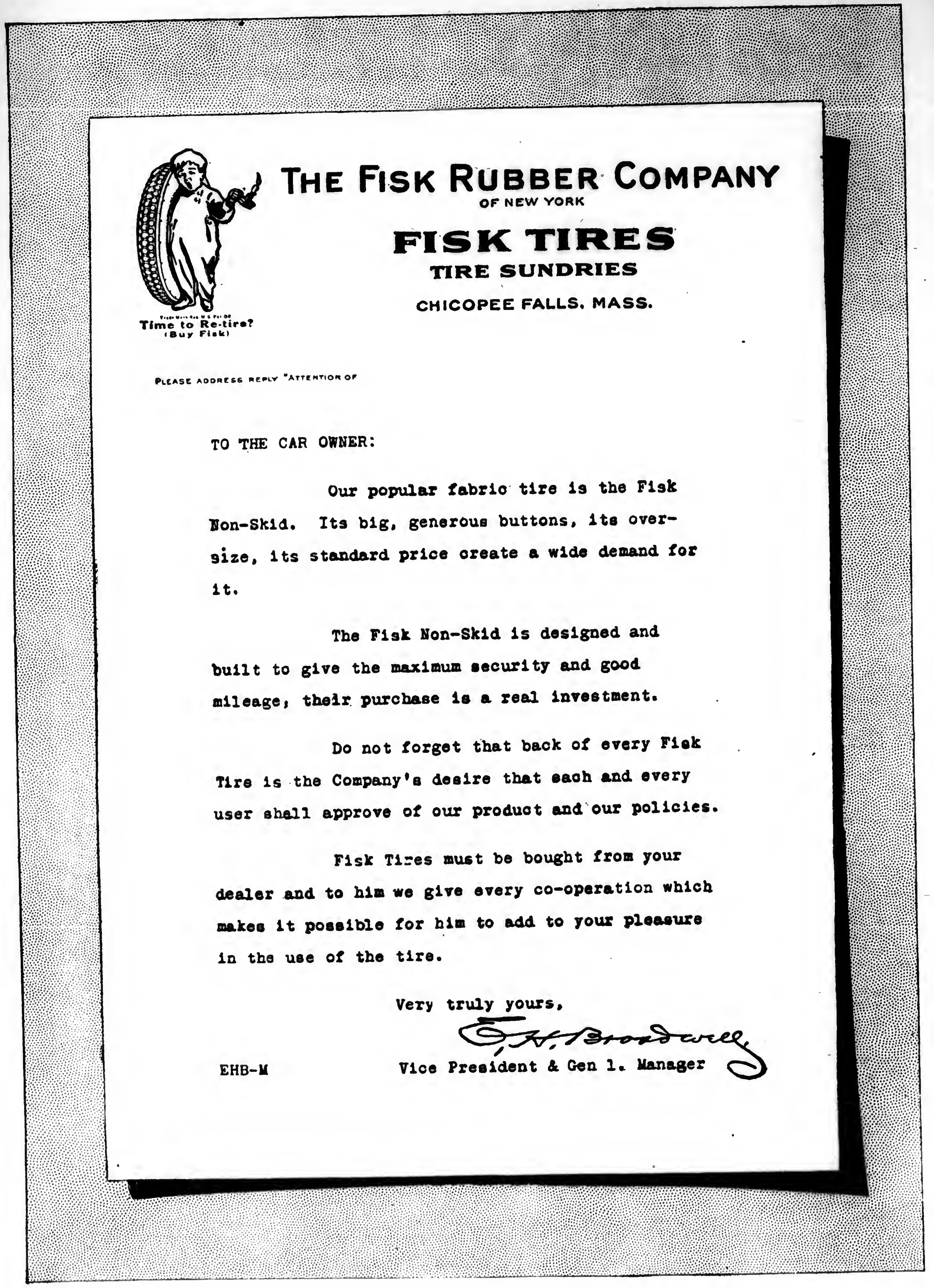

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ESTABLISHED 1880 PUBLISHED WEEKLY

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The Part of Sulfur in Soil Fertility

Some of the New Applications of Sulfur in Agriculture

Dr. Jacob G. Lipman

New Jersey

Finely powdered sulfur may be used in a number of ways for increasing crop yields. The functions of sulfur as a means for increasing the productive power of soils may be briefly considered under three heads. 1.—Sulfur as one of the ingredients of plant food. 2.—Sulfur as a means for making available other plant food ingredients. 3.—Sulfur as a soil amendment.

In considering the first of these topics it should be remembered that without sulfur there could be no plant growth, as is true of carbon or nitrogen or other constituents of so-called plant-food. The need of crops for sulfur will vary with the character of the crop. Generally speaking, cereals may require from four to six or seven pounds of sulfur per acre per annum. Clover, alfalfa and other members of the legume family of plants require more sulfur because of their higher content of protein. It may be assumed that a good crop of clover or alfalfa will require 8 to 15 pounds of sulfur per acre. Very heavy yields of alfalfa would require more. Certain cruciferae, especially cabbage and cauliflower, require even larger quantities of sulfur than the leguminesae. Heavy crops of cabbage may require as much as 30 or 35 pounds of sulfur per acre.

The sulfur requirements of crops are met by the sulfur reserves in the soil. Good arable land usually contains three to five hundred pounds of sulfur per acre to a depth of six or eight inches. Most of this sulfur is present in organic combinations—some of it in the form of sulfates. The soil resources of sulfur are supplemented by those contributed by atmospheric precipitation — usually from 6 to 10 pounds per acre per annum, altho much larger amounts are brought down from the atmosphere in the vicinity of large industrial centers. In considering the sulfur resources of crops, it should be remembered that, aside from the sulfur removed by the plants themselves certain quantities of sulfur are removed from soils in the form of sulfates. The soil is, therefore, constantly losing sulfur thru the removal of crops and the carrying off of sulfates—largely calcium sulfate—in the drainage water. Studies in several sections of the United States show that land that has been under cultivation for some time is poorer in sulfur than corresponding land that is virgin or has been under cultivation only for a short time.

On account of the inadequate supply of sulfur in some soils, especially for crops of a certain character, the application of sulfur-carrying materials often leads to marked crop increases. This fact was recognized more than a century ago by progressive farmers in the eastern United States and in Europe. At the end of the eighteenth century land plaster was used rather extensively by progressive farmers in New York and Pennsylvania. Since the wide introduction and use of so-called superphosphates, or acid phosphate, constituting mixtures of mono and dicalcic phosphate and calcium sulfate ,the sulfur question in plant nutrition has not been prominent in the southern, the middle Atlantic and the northeastern states. On the other hand, farther west, where no superphosphates are being used, there are large areas that are deficient both in phosphorus and sulfur. Very striking results are being obtained in Oregon and Washington from the use of sulfates or elementary sulfur as a fertilizer on alfalfa. Elmentary sulfur is, of course, preferable for this purpose to sulfates, particularly calcium sulfate, since it is more concentrated and, therefore, cheaper to transport and apply. It is recognized that the value of sulfur as a plant food depends upon its transformation into sulfuric acid and sulfates. The oxidation of sulfur into sulfuric acid is a biological process. Hence, the attention which is beginning to be paid to the use of suitable starters of sulfur-oxidizing or sulfofying bacteria. Inoculated sulfur is now being placed on the market by one or two of the sulfur companies.

John R. Mohler, Chief of the Bureau of Animal Industry, U. S. Dept. of Agriculture

In considering the second topic we should bear in mind that phosphorus and potassium are two of the three important ingredients found in commercial fertilizers. The enormous quantities of phosphorus used in American, European and Asiatic agriculture are derived in large measure from phosphate rock. Phosphate rock is ground to a fine powder and used as such to a limited extent. Most of it is treated with sulfuric acid in order that the tricalcic phosphate might be converted into the more readily available dicalcic and monocalcic phosphate. There are being used in the United States an equivalent of two to two and a half million tons of sulfuric acid to produce an equivalent of four to five million tons of acid phosphate. Instead of using sulfuric acid for making available the phosphorus in phosphate rock, elementary sulfur in a finely ground state and inoculated with suitable sulfur-oxidizing bacteria may be used on the farm for the home manufacture of superphosphate. Similarly, materials like green sand marl, containing the potash-bearing mineral glauconite, can be mixed with the sulfur in order that soluble potassium salts may be produced thru the action of the sulfuric acid manufactured by the sulfur-oxidizing bacteria.

Soil amendments are substances that do not in themselves furnish plant food, but improve the texture of the soil or in some other way favorably affect the soil environment of the plants. For instance, the use of sand on heavy clay soil, the use of clay on sandy soil is intended to improve the texture of the soil. Some materials may be both fertilizers and amendments. It is one of the functions of elementary sulfur to serve as a soil amendment in so far as the soil reaction is concerned. Certain fungi are troublesome in soil that is alkaline or only slightly acid, and there are millions of acres of land in America and elsewhere that contain excessive quantities of sodium carbonate and bicarbonate. Such land is known as "black alkali" soil. It would seem that there are possibilities of reclaiming such soils by the use of inoculated sulfur.

DR. JOHN R. MOHLER AND HIS MEN

John R. Mohler has been with the United States Department of Agriculture as chief, assistant chief, head of the pathological division and one thing and another in the Bureau of Animal Industry for 23 years.

The Bureau of Animal Industry is the biggest enterprise of its kind in the world. It employs 4,400 people, about 500 of them in Washington and the rest scattered all over the United States. Among them, they are the final authority on nearly everything pertaining to live stock. Three of them discovered the hog cholera serum that has reduced losses from that disease enough to save the farmers of the United States about $40,000,000 a year—a discovery by means of which any farmer can protect his hogs against cholera.

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(Continued on Page 18.)

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Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Soldiers to learn Farming

SOME farmer organizations have protested that the recruiting activities of the Army, Navy and Marine Corps were tending to increase the farm labor shortage by inducing farm boys and other labor in rural communities to enlist. Secretary of War Baker has stated that the Department has taken steps to reduce to a minimum the work of recruiting in rural communities and will concentrate its work in the cities.

The newly conceived purpose of those in charge of army recruiting and soldier training differs materially from the old purpose of making fighting soldiers only. They state it in these words: "While establishing an efficient defensive force it is the aim of the War Department to create a great industrial army so that as fast as the young men are discharged they can take their places as producers." A number of "thoro courses in agriculture" have been introduced with the idea of fitting young men to engage in farming upon the completion of their enlistment. This is certainly a unique method of making farmers. It is to be hoped that it will be more successful than was the result of the experience during the late war from which only a small proportion of farm boys returned to the farm from the army. Will the army also undertake to fill the depleted ranks of teachers and preachers? It will be something new under the sun if the Department of War should be transformed into a great university and vocational school.

The Hay Crop

THE CONDITION of the hay crop according to the Government's estimate for June is 88.9 percent. Only once in the past nine years has the figure been as low as this, yet the total crop in the country will probably be near a record breaker because of the larger acreage due to the rapid increase in alfalfa growing. The labor shortage and the high market prices tend to increase the acreage devoted to hay. It is evident that increased production can continue profitably up to a certain point only.

There is one good opportunity for the average hay producer to increase the returns from his hay crop, and that is to produce a better grade of hay. There are entirely too many weeds sent to market, and Number 1 hay is always scarce. The farmer often blames the hay dealer for cheating him in returns when the real trouble is the hay contained weeds and trash which made a low grade article. It is entirely possible to rid the average farm of its annual crop of weeds by careful farming and the sowing of clean seed. As with everything else, the market standards are increasingly higher and buyers more critical. Profits in any crop depend upon the proportion of first class products the producer has to sell.

Crop Prospects Improve

WITH the coming of warmer weather and sufficient rains the condition of nearly all crops has improved during the past month. The scare of crop shortage raised last spring has induced the planting of thousands and lots and gardens by those who are not farmers, and the indications are that the average housewife wherever she lives will make more than the usual effort to preserve in some way everything possible. Without doubt there will be enough produced to keep the wolf from the door next winter, providing nothing is allowed to go to waste that can be saved. The scarcity of sugar may cause some to think it impossible to do even the usual canning, but sugar is not indispensable and all food products should be canned or dried so that want may be avoided even tho sugar may still be scarce when the food is desired.

The Grange and Politics

WE HAVE several times wondered upon reading the advices and comments from the National Grange Headquarters at Washington just how far those comments reflect the mind of the average member. We agree with them on the general policy of refusal to affiliate with other bodies having selfish or ultra-radical political purposes, or even with staid political organizations. But we do believe in honest political discussion, and in intelligent, independent political action among farmers. It is not necessarily being partisan to discuss principles, or even an official's political record, as they affect the farmer and his business. The latest communication from the Washington Headquarters contains the following:

"A newer generation not familiar with the history of the 'groundswell' of the seventies, or the 'Farmers' Alliance' of the eighties, is now active in public affairs. This wave of farmer activity in politics which is now at its crest, is neither novel, nor different. The Grange has lived thru such two experiences, witnessed the rise, and wane of these efforts, measured their results, and has seen its own organization and membership weakened by the failure to achieve anything tangible. It is sound judgment, based on the 'wisdom of the past,' that keeps the Grange out of politics now. History proves that the fraternal, educational, social and co-operative efforts of the Grange, win far more for country people, and country life, than political activity or political office. For fifty-three years the Grange has fought for wise legislation, for sound policies of government, and for honest and economical administration, willing to let the electors of the nation chose the men to make and administer the laws, without the attempted domination of any class, clique or group of the citizenship."

It is as impossible as it is undesirable to organize a farmers' political party, or even to affiliate with other classes for that purpose. Under our system of government, and with the existing political machinery it is possible to progress and promote justice if voters will acquaint themselves with their opportunities and duties. For this purpose it is necessary to discuss men and measures and the members of all farmers organizations should be free to consider them, the Grange not excepted. The time is passed when intelligent men and women are mere partisan shouters to be disgruntled by honest political discussion. No one knows better than Prof. Atkeson what the so-called "Granger Movement" of the seventies accomplished for the farmers of the Middle West, and how the Grange flourished because of its achievements, and how it went into a stage of decadence during the period of inactivity following. Besides the economic phases of agriculture which are affected by political policies, there are ethical and moral questions which, having been brought into politics, need the attention of farmers. The time has gone by when men or classes should be encouraged to play the part of lukewarm mollycoddles.

Our Washington Letter

The transportation act which restored the rails of this country to their owners, gave the railway corporations a guarantee of six percent on a reasonable valuation, but the increase in freight rates which will yield the railways $1,017,776,995 annually, is approximately $386,000,000 more than will be necessary to give them this return, according to Clifford Thorne, representing the American Farm Bureau Federation, in his statement on behalf of the shippers before the Interstate Commerce Commission, a few days ago. "This," says Mr. Thorne "is the first billion dollar case ever tried before the Interstate Commerce Commission, or any other tribunal. At this moment railroad labor is demanding a billion dollar increase in wages. It is distinctly understood that the rate advance in this case will not care for any portion of the increase that may be necessary because of wage advances ordered by the Labor Board; that will be followed by another freight advance, as a matter of course. During the past three years the total annual interest charge on the public debt of the United States government has increased from $23,000,000 to $1,053,000,000. If the railroad stockholders and bondholders, as well as railroad labor, are successful in all their demands presented at this time, the increased transportation burden on our people will be twice as large as the total annual tax burden occasioned by the greatest war debt in our history.

In support of his contention, Mr. Thorne said the "book value" of $20,616,000,000 used by the railroads as a basis of their computations, was excessive by several thousand million dollars. This is three billion dollars greater than the total par value of all their stocks and bonds outstanding in the hands of the public.

In concluding his argument, Mr. Thorne gave the Interstate Commerce Commission to understand that the farmers he represented had no desire to cripple the railroads. "The railways must prosper; all industry depends upon their efficient operation," he said. "But at this time the railroads must not be exorbitant in their demands."

* * *

The McFadden personal credit bill, H. R. 12-678, now pending in Congress is arousing much interest thruout the country. Its official title is the Rural Credit Act," and its object is to create a rural credit society and general insurance league to facilitate the increase and reduce the cost of farm production, and act as the fiscal and financial gent for the government."

The Rural Credit Society, which is the twin sister of the Liberty Insurance League, is authorized in such manner as may be prescribed by the Secretary of Agriculture and approved by the society's board of directors, to do a general banking business. It provides for one central bank, forty-eight branches, one for each state, and numerous local associations to be known as communes. The capital of the society consists of a guarantee fund and the stock of its branches and communes. The guarantee fund, consisting of $25,000,000, is to be furnished by the United States government without interest. This $25,000,000 is to be paid into the treasury of the league when the commissioners have been able to induce a life insurance company to accept the Liberty Insurance League charter and the league is authorized to begin business. The League is to hold this fund until the Secretary of Agriculture orders it paid over to the Rural Credit Society's treasury, less the compensation allowed for the risk of accepting such trust.

The McFadden bill provides for a large number of directors and other salaried officers, the salary of the censor of which there may be three appointed, being $12,000 a year.

The Liberty Insurance League scheme provides for departments each having a capital stock of $100,000, and the stockholders are to be paid a dividend, if earned, of 7 percent per annum, which dividend shall be cumulative and paid semi-annually. The stock is nonassessable. The bill includes an old-age pension fund, and other features of varying degrees of importance.

Before taking action on this bill a joint commission of the House and Senate will make an investigation of the personal rural credits systems of Europe.

At the recent annual meeting of the American Agricultural Editors' Association there was considerable discussion regarding the merits of the McFadden bill, several editors who had given it much study saying that they were favorably impressed with it, but it was evident that a larger number were either opposed to the bill or were not willing to endorse it. Nevertheless the sentiment was apparently unanimous that some kind of personal credit system is needed in this country.

None of the farmer organizations having headquarters in Washington have made any definite statements regarding the bill. Giving his personal views, however, Charles W. Holman of the National Board of Farm Organizations, says: "I cannot see any benefit coming to America agriculture from any scheme of personal credit that is not founded on any recognized principles of co-operation such as are in successful operation in some of the foreign countries in which I have studied personal credit systems. I am very much committed to the adaptation of the Raffeisen plan to American conditions. I think it is entirely possible for the country to have a personal credit system, including regional banks and local associations."

The American Farm Bureau Federation favors a personal credit law, but has made no statement in regard to the McFadden bill, acocrding to O. M. Kile of the Federation Washington headquarters. The insurance company scheme is one of the objectional features which will not meet the approval of the farmers, Mr. Kile thinks.

Professor T. C. Atkeson, Washington representative of the National Grange, speaks of the McFadden bill as a long complicated measure, which needs to be simplified. The National Grange has endored the principles of the personal credit bill in these words: "In order to encourage farm ownership and production and to make it possible for farmers to capitalize their health, efficiency, education, character and industry, we favor a properly safeguarded system of personal credit." The grange has not endorsed the McFadden bill, and Professor Atkeson thinks it will need much revision. It will never pass Congress in its present form.

Mr. Milliken, author of the McFadden bill, it is claimed, has devoted many years to the subject of personal credits and the present bill is the result of his years of investigation and study. He is in the insurance business and his bill proposes to invest the government's millions in an insurance company. Mr. McFadden is a Pennsylvania banker, and his record in Congress shows that he is against the Federal Land Banks. These are some of the things that will make the friends of personal credit want to investigate the McFadden bill several times before giving it their unqualified endorsement.

At the last annual meeting of the National Board of Farm Organizations the board went on record for a Federal amendment which would provide that seed dealers shipping in interstate commerce must confirm with the laws of the states into which their shipments are made. Since this meeting the board has received considerable information showing that it is impossible for states having good good seed laws to protect farmers against shipments made from outside the state. The National Board is preparing to press this matter at the next session of Congress, that the economic losses to agriculture on account of inferior seeds, amounting to hundreds of millions of dollars annually, may be saved and the farmers protected from unscrupulous seed dealers.—Elmer E. Reynolds.

W. I. CHAMBERLAIN DIES

William I. Chamberlain, 83, contributing editor of the Ohio Farmer and former state secretary of agriculture, died last week at the home of his daughter, Mrs. H. H. Hosford, 2333 Grandview Avenue, Cleveland Heights, O.

Dr. Chamberlain was connected with the Ohio Farmer many years and contributed to the magazine continually until his death. For five years he was also an editor of the National Stockman and Farmer, published at Pittsburgh.

Most of his life Dr. Chamberlain spent on his farm at Hudson. He served as state secretary of agriculture from 1881 to 1886. The next five years he was president of the Iowa State Agriculture College at Ames, Ia., leaving there in 1891 to return to Hudson.

HARRISBURG LETTER

Earth Yielding Increase.—Reports coming to the State Department of Agriculture are declared by men who have been studying them to be indicative of generally good conditions when one considers what was feared and what happened to some crops a year ago. But while the harvest is at hand it is frankly admitted the gathering a problem of the utmost seriousness. The wheat harvest is somewhat late in southern Pennsylvania and this fact is enabling people to effect a better organization to handle it. In some districts community harvesting will be carried on and folks in the towns are being asked to "come back home and help out." The fruit estimates continue to be very favorable and thus far comparatively few of the enemies of corn and potatoes and staple vegetables have been reported. Secretary Fred Rasmussen says the labor condition is the greatest problem he has ever known and has been in touch with men in almost every county in efforts to better the situation.

The Idle Farms.—Complete data on the situation as regards idle farms in Pennsylvania which has been the subject of much newspaper discussion is now in hand for June 1 is stated to show 3,010 farms in the state actually reported, investigated and listed as idle and untenanted and an estimate of 6,469 as the grand total. The number of farms has been various, estimated as around 214,000 for the whole of the state. Butler, Armstrong and Jefferson, soft coal and manufacturing counties, make the worst showing, having around 140 idle farms reported. It is not so long ago that these counties were noted farming and stock raising counties. But one of the serious features of the report is that Bradford shows 123, Susquehanna 123 and Tioga 90 idle farms reported. These counties are noted for various branches of agriculture. Northumberland, a coal county, shows 72 idle farms with 156 as the estimate. Lancaster only shows 12 and Cumberland but 6 and Franklin 4. Berks shows 28 and Chester 22, but York has only 14. In the western country Westmoreland shows 57 idle, Washington 24, Mercer 59 and Greene 50, while Erie has 71 and Crawford 55. The estimates in most of these counties are double the figure reported on. One of the interesting features is that Lebanon and Lehigh report only 3 each and Delaware 4, while Indiana has 110.

More Game Preserves.—The plans of the State Game Commission as out-lined at the meeting here a few days ago, contemplate buying about 40,000 acres of forest lands for establishment of preserves and use of probably half that much of land already owned by the state. The entire cost is being taken out of the hunters' license revenue.

The Apple Survey.—The survey of the apple industry of Pennsylvania, which will follow the lines of the tobacco growing industry reported recently, starts this week and the moving man, the fruit expert, the zoologist and the investor will each make notes in their own particular way. The results will be published and information as to each phase of the apple industry will be collated. This year numerous young trees will commence bearing and there will also be considered planting, some of which has been already noted.—Hamilton, Harrisburg, July 5.

NEW YORK LETTER

Plans For Farmers Exchange.—With the campaign to raise a million dollars capital nearing a successful close, the directors of the Grange League Federation Exchange will give their initial efforts to improving the feed situation for farmers. Prof. E. S. Savage of the State College, long in touch with farmers' needs in feeds has been engaged to investigate, the feed situation in the West, with the idea of buying grain in large quantities, grinding and mixing it into feeds, and selling it co-operatively. Members of the Dairymen's League alone can use $25,000,000 worth of feed yearly or 450,000 tons. The exchange will also buy grass and clover seeds direct from other states. Michigan and Illinois bureaus have already offered co-operation in the purchase of these seeds.

Freight Rates For Farmers.—The plan of the American Federation to secure freight rates for farm produce as are made to other industries meets with popular approval in this state. The appropriations for farm economics and for education also are heartily approved.

Prizes For Junior Cattle Judges.—At the big sale of cattle held by the Otsego County Holstein club this week the boys and girls will engage in a cow judging contest, with four prizes to be awarded to winners. A big day of sports has also been arranged. In Utica the Oneida County Holstein breeders' have a sale of fine stock on the same day.

State Police Get New Equipment.—The rural police have purchased 8 new motorcycles and 4 automobiles for each troop, for the better guarding of highways. Horses will be discarded except for winter use, within a few years at least. There is great need of curbing reckless driving on the highways.

Cheese Advance.—The Watertown Dairy board reports a rise to 25¼ cents in the wholesale cheese price this week and a further premium of 1 cent a pound on sales is expected.

Retail Milk Goes Up.—On July 1 the retail price of milk in New York City will be raised a cent a quart on a fourth of a cent increase in the wholesale price, further proof of the great need of curbing profiteering on the part of distributors. One leading milk firm has asked for a city ordinance to compel the return of milk bottles, saying they lose $35,000 worth annually.

Sale of New York Farms.—The Farm Brokers' Association of the state announces that between January 1 and May 1 of this year over $1,300,000 worth of farms were sold.

Grange Wants Commissioner.—The New York State Grange urges the appointment of its master W. N. Giles to the office of State Commissioner of Agriculture to succeed Chas. S. Wilson resigned. The salary is $8,000 a year. It is feared that the appointment, which is to be made this week, will be confined to the Council of Farms and Markets' political family.

Delay in Auto Licenses.—Auburn prison was to make the 1,500,000 license plates for next year, but cannot get all its machinery or raw materials. A search of other prisons is being made for more men of ability to work at the manufacture of plates. The mentality of the Auburn inmates is found to be not very high and they are not able to keep up the speed expected.—F.

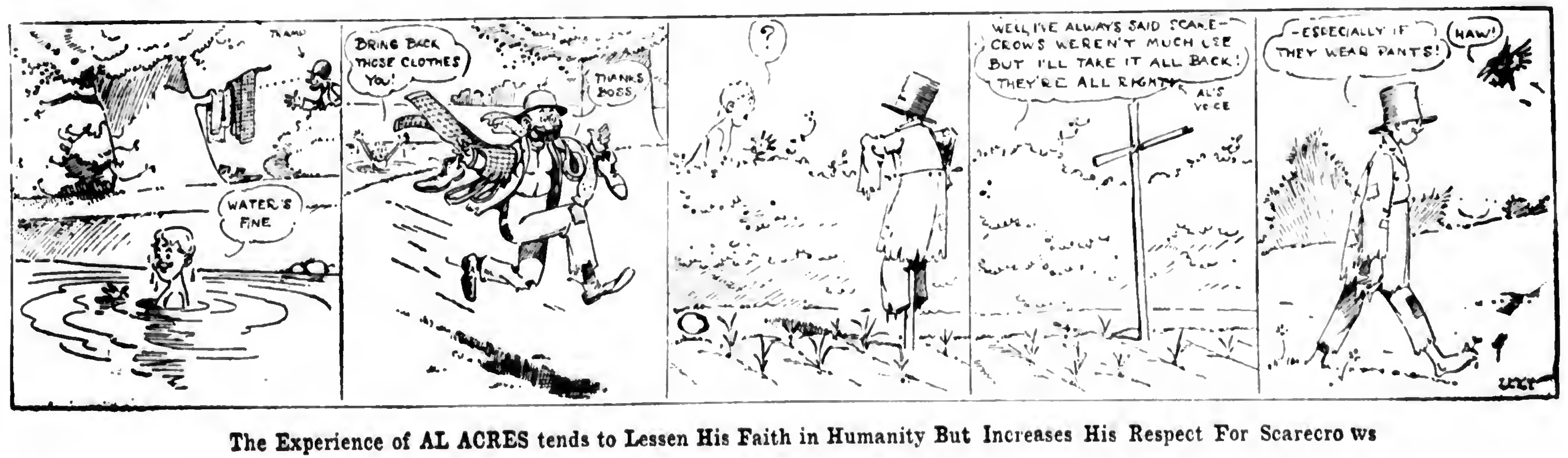
NEW JERSEY NEWS

Agricultural Conference. — Interesting information along agricultural lines was secured by New Jersey farmers at a conference and inspection of what is known as the Clinton Farms, located at the New Jersey Reformatory for Women at Clinton, Hunterdon County, when recognized experts placed at the disposal of the visitors all of value growing out of their years of experience. The session of the day was opened with an inspection under the direction of the farm manager. This inspection afforded the state officials and farmers and others in attendance to see the results of annual contests in truck gardening among the cottages at the institution, as well as progress made so far in the potato field, orchard and dairy. Following a luncheon, a business session was opened by Commissioner Burdette G. Lewis, of the State Department of Institutions and Agencies, who presided. General agricultural conditions and soil improvement were discussed by Prof. Alva Agee, of the State Department of Agriculture. Then followed a general discussion in which the farmers made known their problems and were given expert advice.

Berries in Market.—New Jersey grown huckleberries are now in the markets of the state at 40 cents per quart. They are of good quality. Cherries of a fine grade are also being sold by the marketmen. The price is $2 per basket. Strawberries and cantaloupe remain about the same. Watermelons are quite high. Tomatoes, cucumbers, green onions, radishes, green peppers, and lettuce continue better in quality and the prices are gradually lowering. Green peas and string beans are sweet and tender and reasonable. New potatoes grown in Jersey are being disposed in the markets at a very high price, while the prices asked for old potatoes are moderate. Butter has taken a slight rise in price but eggs continue to drop.

Produce Prices Vary.—While peas are selling at Bridgeton at $2 per bushel and 18 cents per quarter peck, they have been selling in Paterson at $2.40 per bushel and 30 cents per quarter peck. The season for this vegetable is almost ended in the southern counties, while hot weather will quickly wind up the crop in the northern parts. It has been stated that no results in decreasing the prices charged to consumers have aparently been gained for peas because with the vegetable at $2.50 per bushel wholesale, like at New Brunswick and Trenton and 30 cents per quarter peck or $4.80 per bushel, retail, is not quite a 100 percent spread. It has been suggested that if the retail merchant needs that much it looks as tho the consumer had better consider ways of reducing the retailer's selling and delivering costs, while it has also been mentioned as being worthy that housewives talk this matter over with the dealers. The wholesale price for lettuce is six cents per head while at retail it is nine cents in Trenton, while at Bridgeton it is 12 cents and at Beverly 10. The best lettuce is mostly coming from about Trenton and northern farms.—Kelly.

Sunlight puts vim, vigor and vitality into little pigs and lambs.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NEW YORK DAIRYMEN'S COOPERATIVE PLAN

Officers of the Dairymen's League, Inc., announced that the Dairymen's League Cooperative Association, Inc., now operating twelve farmer owned country milk plants, has campaigns under way to buy existing plants, or to build new ones, in thirteen widely separated sections in League territory. The new projects call for raising nearly $4,000,000, a large part of which already has been subscribed. Requests from dairy farmers to launch additional campaigns are being received at League headquarters faster than they can be handled.

The New York System of Marketing Fluid Milk

Ever since milk has been shipped to the cities the country milk stations have been in the hands of distributors and manufacturers. These plants include milk shipping stations, butter and cheese factories and places for the manufacture of condensed, powdered and evaporated milk and other milk products.

Ownership of country milk plants by producers means to the farmer, according to league officials, an assured market for his milk, stability of business and a more equitable distribution of the proceeds. It means to the consumer fair and reasonable prices, they declare, as cooperative activities will result in reduced costs. Reasonable prices for a uniform high quality brand of products, they say, will bring about increased volume of business with increased returns to the producer in his capacity as manufacturer.

The League intends to go slowly and develop the co-operative plan one plant at a time. Creameries and condensaries will not be built merely to permit producers to enter into competition with established plants which are taking care of the milk of a particular community. Cooperative plants will be established only in sections where the farmers believe their best interests demand they should have a plant. In every case the farmers must back up their beliefs with the required capital.

COWS AND COW PRICES

My neighbor went to get his cows in the early morning lately and found ten of them huddled together dead. Lightning had been playing pranks in the night, yet left but very slight evidences of a visit other than the dead cows. It is rather hard to make an estimate on their value. They were all good cows raised by the farmer from a pure bred bull. Perhaps their market value might be estimated at $1500, yet $1750 would not be considered a bad estimate. Cows are not selling as high as a year or so ago. Underwriters have fixed $45 as the limit on any cow, except a pure bred. This was low ten years ago but it is hardly reasonable now. I suppose that the price of cows is likely to go still lower but I do not look for fifty dollar cows any more unless it may be in the case of something quite inferior. It is not a matter to hammer on very hard, perhaps, but it seems to me that $45 limit on a cow is pretty low even for the cow ten years hence. In a case like this no one can foresee nor avert such a calamity. Hides are lower and a net loss of a thousand dollars is a reasonable estimate on this.

The next day I attended an auction at my neighbor's on the other side. He had twenty-seven cows and four yearlings. Some of these were pretty good cows yet the average did not seem to me to be up to what a farmer needs these days. While I have no figures to go by I would estimate their production average as rather less than 5,000 pounds of milk. The owner was seriously ill in the winter and the family are none too strong for a dairy farm. No help can be had that can be counted to stay. It seemed best to reduce the herd. I was interested in the way of doing it. My information is that the whole bunch was sold to a dealer from a distance for $2500. The dealer advertised the auction and a bunch of four or five other dealers came from an adjoining town. Everybody says the whole group of dealers had an understanding and so it would look. At any rate the bidding was quite brisk, but I have yet to find any neighboring farmers who took away any of the stock. The former owner has left nine of the cows and the four heifers. I would estimate that these cost $1200 or $1300. The others I think went away in a bunch.

There can be no criticism on a man selling out completely and then buying back whatever he wanted. Those who came to bid could pay whatever they choose just the same. The whole lot went at about $2900. This left the dealer a nice margin, and left the farmer with what cows he cared to keep. Had the farmer made the auction he wouldn't have got the dealers to take the same interest if indeed they would have come at all, or at least not in the same numbers. The weak spot in this is that of the dealers knew the farmer had selected certain ones they might make him pay well for them or go without. As I understand it, neighbors did the bidding for him. No one buying more than three or four head. This plan might not always work well, but in this case it worked out well for everybody. A former's auction might have resulted in a $2000 sale.

More dairymen are getting interested in pure breds. A complete wrecking of the dairy industry is unthinkable, even if some of the milk buyers did say last May that they would do just that. Granting a fairly prosperous dairying business a careful advance with purebreds looks safe. On this ground the junior project calf clubs would seem to be justified. These however, need to be well handled. It is easily possible to pay too much for the calves and equally easy to make a mistake in their selection. After the usual sort of a pure bred calf has been brought at $125 to $150, it is going to require good keep to make them really worth their cost at a year hence. In many cases at the auction these yearlings have been sold back to the first purchaser at prices beyond their market value, the extra price being the profit in past at least to the care taker. This puts on sort of a ficticious gain.—H. H. Lyon.

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STARTING THE DAIRY CALF

(Continued from Page One.)

policy to guess at the amount in order to save a little time or trouble. The change from whole milk to skim-milk must be made gradually, and the skim-milk increased at the rate of half a pound per day, with the whole milk decreasing at the same rate. The change should cover a period of from two to three weeks before it is completed. At this time the calf will be about six weeks old, and may safely be fed from twelve to sixteen pounds of skim-milk per day.

Here again the question of the length of time to continue feeding skim-milk varies with individual conditions. If possible, it should continue until the calf is seven or eight months old, and many breeders continue it up to a much later age. A great many calves, after reaching the age of four months, are successfully reared on milk substitutes. But if these are used, a good start with whole milk is more important than ever.

At about the time the substituting of skim-milk is started, the calf will readily learn to eat grain. A good time to feed the grain is just after they have had their milk, as this will tend to prevent their sucking each other or anything they can get hold of. Corn, oats, bran and oil meal are excellent grains for the calf ration. Either whole corn and oats, or cracked corn and ground oats may be used. They should be fed just what they will clean up at one feeding, and any that is left, should be removed. To start with, not more than half a pound per day should be fed, up to eight or ten weeks of age. And from this time until they are weaned, a pound per day will usually be sufficient under average conditions. Hay may be added to the calf's ration at about the same time the feeding of grain is started, and legumes are preferable. Both clover and alfalfa are valuable in this respect. Alfalfa should not be fed to a very young calf, because its high protein and ash content will tend to cause digestive troubles. Mixed hay is better suited to a very young calf than alfalfa. Red clover may be fed to advantage. Water is essential to the calf, even tho it is being fed milk, and the calf should be given the opportunity, at least once a day, to consume all the water it wishes. Salt should also be provided as soon as the calves are old enough to eat hay and grain.

The calf pen should always be kept clean and well bedded. It should be situated in a light, well ventilated place, but protected from drafts. With a very young calf dirty pens and dirty feed pails will cause more trouble than almost anything else. And even with an older calf there should be no relaxation from this matter of cleanliness. Always remember that the cow is a mother and the calf a baby, and treat them as such. Kindness plays an important part with the successful calf raiser. It is not a complicated, hard proposition to raise a calf up to a producing age. And when that age is attained, and we have a large, well grown, healthy heifer, showing every indication of developing into a good producer, we can afford to feel proud, and feel that our efforts have been well rewarded.

If the fruit grower will take care of his orchard, his orchard will help take care of him.

CORDS CAREFULLY BUILT

If we were asked to name the one point of greatest superiority which marks Mohawk Cords above other tires, we would name *"Care that Goes In to Their Making."*

Careful work was the solid foundation on which the Mohawk Rubber Company was organized seven years ago and on which it has grown to a position among the leading tire companies of the country.

This dominating principle has been maintained in the selection of materials and in the building of all Mohawk Tires—both Cord and Fabric—and Mohawk Tubes. We have adhered strictly to the policy of using only pure rubber and the best of fabric obtainable, plus the necessary compounding materials, in spite of the alluring cost-cutting possibilities of the thousand of substitutes which are to-day common in the tire business.

Mohawk tires are built by hand because that is the more careful way.

Mohawk Cords range in size from 30 x 3½ for Fords to the 40 x 8 pneumatic for trucks. You will find that Mohawk Cords weigh more than the average cord tire—as much as 8 to 10 pounds in the larger sizes.

Made in Cord and Fabric Types

Good dealers everywhere handle them

MOHAWK RUBBER COMPANY, AKRON, OHIO
New York San Francisco Chicago Dallas Boston Los Angeles Atlanta Kansas City

MOHAWK "Quality" TIRES
HAND MADE

PUT THIS CONCRETE MIXER ON YOUR FARM

You can't afford to waste valuable time, good materials and money by having to do over again concrete work which was mixed by shovels. Get a Sheldon Farm Concrete Mixer and put in your own concrete so it will last a lifetime—it will save its price on the first job. What is more, you can do the work when you please in otherwise idle time. No big gang of men needed.

SHELDON BATCH TYPE CONCRETE MIXER

is made especially for farm use and has a reputation of six years of successful operation on thousands of farms all over the U. S. No complicated machinery to get out of order—easy to operate—easy to move—mixes 3 cubic feet at a batch—a 1½ H. P. engine will run it. No other mixer excels its quality of work nor approaches its low price.

FREE—New 1920 Catalog—FREE

It illustrates and describes all types of Sheldon Mixers and gives all of the prices. It tells about our special 30-day Trial Privilege Offer and tells you how to save money on your concrete work. It's FREE. Get this book Today.

SHELDON MFG. CO.
Box 672 NEHAWKA, NEB.

Before You Buy Your Silo, investigate the reliable Green Mountain. Send for circulars describing long-life, tight construction, new Anchorage System, etc. Creamery Package Mfg. Co., 345 West St., Rutland, Vt.

GREEN MOUNTAIN SILOS

R&B Co

Warmth at a Saving

Save all the expense and the labor of cutting up your walls and partitions for pipes. Install the famous Richardson One Pipe Heater, which burns any fuel available. And because there is no waste heat, it is the most economical and efficient heating system used.

Warmth in Every Room

Notice the direction of the heat in the accompanying picture. All the cold air in the house is drawn into the single register and the one pipe heater, where it is warmed and sent into every room. Know that true comfort and the kind of warmth which Richardson & Boynton Company has made famous because of its efficiency and economy.

Permit us to send you Booklet E describing the

RICHARDSON ONE PIPE HEATER
Keeps the cellar cool for vegetables — warms every room above
RICHARDSON & BOYNTON CO.
Established 1837
258-260 FIFTH AVE., NEW YORK
Boston Chicago Philadelphia Providence Rochester

COUPON
Dear Sir: Please send us full particulars of your Richardson & Boynton One Pipe Heater for house of.........rooms
Name..........................
Address ....

Please Mention Pennsylvania Farmer When Writing to Advertisers

Spark Plugs and Harvesting

THERE you are, 'way out in the field, far from the barn. A spark plug goes dead. You've got to hold up the binders until you can send back to the barn for a new plug. The hands have to wait till you make repairs.

The surest guarantee we know of against these spark-plug delays is to use sure-fire Bethlehem Spark Plugs in every cylinder. Bethlehem construction lessens the possibility of their misfiring when there's work to be done.

The mica in the de Luxe Tractor Plug is wound around the center spindle, *then reinforced* with mica washers, compressed into a granite-like whole. This plug stands the brutal punishment of tractor operation.

The great International Harvester Company, after exhaustive tests, has adopted Bethlehem Spark Plugs as standard equipment. Bethlehem Automobile and Truck Plugs are equally dependable. Studebaker, Marmon and 48 other manufacturers equip with Bethlehem Plugs.

Write for free copy of "Hit or Miss?", which tells what you want to know about spark plugs.

BETHLEHEM SPARK PLUG CORPORATION
E. H. Schwab, *President*
Bethlehem, Pa.

Bethlehem **SPARK PLUGS**

"They Pull You Through"

COLONIAL
SPECIAL FARMER'S
SALT

Is specially prepared for salting meats. Won't cake. You use less because it penetrates the meat very quickly and does not leave a crust on the outside. The soft, flaky grains make Colonial the quickest dissolving salt produced.

THE COLONIAL SALT COMPANY
Akron, Ohio

HOLDEN Lime and Fertilizer Distributor

Handles All Kinds of Lime Rock and Fertilizer
Spreads 75 to 10,000 Pounds Per Acre.

The only successful lime and fertilizer distributor—saves time, labor and money. Handle fertilizer only once by hauling direct from cars to field. Patented Auger Force Feed—*attaches* to any wagon—*no holes to bore.* Spreads evenly 16½ feet wide, on hilly or level land. Simple and practical; no clogging or caking possible. Built strong—will give years of service. Hopper is level with bottom of wagon. Low in price.

Guaranteed To Handle Wet, Dry or Lumpy Lime (In Any Form), Commercial Fertilizer, Phosphate, Gypsum, Wood Ashes, Crushed Shells, etc.

Put this distributor to every test—you run no risk. The Holden Lime and Fertilizer Distributor is guaranteed to do all that is claimed for it or you may send it back and your money will be refunded. Thousands now in use—a proven success in all sections of the country. Write TODAY for full particulars.
DEALERS WANTED

I have one of your lime distributors and it works fine. We covered about five acres today and done it with two horses and hauled the lime about one mile. We used 16,850 pounds.
H. E. Zimmerman.
Bellefonte, Pa.

The Holden Co., Inc.
115 Olive St., Peoria, Ill.

HORTICULTURE

RULES FOR THE PACKING OF APPLES IN PENNSYLVANIA

Regulations covering the packing of apples have just been approved by Secretary Rasmussen, of the Pennsylvania Department of Agriculture, in accordance with the provisions of the Apple Packing Law. These regulations will go into effect with the crop of the coming season, and cover all apples grown in Pennsylvania and packed in closed packages of any kind.

These regulations make no provisions except such as are required by existing law. Every grower who is interested in the future of the industry knows that consumption can only be increased by the sale of apples which are packed honestly. For this reason the Department believes that it will have the support of every grower who desires to market the constantly increasing apple crop of Pennsylvania.

Good commercial practice today requires that the name and address of the packer, the minimum size of the fruit, and the variety shall be marked conspicuously on the end face of the package. Existing State and Federal laws also require that the contents of any package of food shall be marked upon the package. Business experience has proven that the exposed face shall truly represent the average of the balance of the contents.

The above points are required by the regulations, and compliance with them will certainly work no hardship upon any packer of apples in the state. No system of grades is required. During the coming season the Bureau of Markets hopes to make a study of this subject, so that it will be in a position to advise growers definitely. The only provision regarding the quality requires that the exposed surface of the packages shall fairly represent the balance of the contents.

The enforcement of this law will be handled by the Bureau of Markets, in conjunction with the other Bureaus of the Department. The Bureau of Markets, thru its various branch offices, will have a representative in most of the large market centers of the state. These men will be glad to furnish any information to the growers in the vicinity of each office.

Any violations of these regulations should be reported to them or directly to the Harrisburg office. Printed copies will be available in the near future at either the branch offices or at Harrisburg.

It is believed that any important improvements in the marketing of apples must be made along lines which are practical for commercial use. For this reason the Department requests every organization and individual interested in the apple industry to co-operate in the enforcement of these regulations.

Well Graded and Attractively Packed Peaches

THE BLACK PEACH APHIS

The Black Peach Aphis is dark brown or black in color and a serious enemy of peaches. It feeds, during the entire year, on the roots of the trees and is also found during the spring and early summer on the tender twigs and leaves.

Altho it thrives best upon trees growing in sandy soils, the black peach aphis has been found a foot or more beneath the surface of the ground on trees growing in stiff clay. Nursery stock is particularly liable to infestation, particularly if grown on sandy soil and thus is transmitted to orchards.

Infested trees make a poor growth and often the lack of vigor in the trees attacked is attributed to yellows, winter injury, lack of nutrition or the use of strong insecticides in winter. Such trees do not make a proper growth nor can they support a crop of fruit.

Control—Set only clean trees, trees that have been fumigated with hydrocyanic acid gas or whose roots have been treated by removing the earth and dip the roots in a strong tobacco concoction (Black Leaf 40 one to 800 or even 600).

Growing trees that are infested should have the earth removed from about the roots and a pound or two of tobacco dust placed therein and the earth replaced. Surface water will take the nicotine down to the aphids, killing them. The aerial forms can be killed by spraying with tobacco extract (Black Leaf 40 one to 800), adding two pounds of soap to each 50 gallons of diluted solution.

Land fit only for forests should be producing forests; otherwise it is worse than useless to its owner.

SAVE THE CHERRY CROP

Many cherry trees fail to produce a full crop of cherries because the trees have failed to make a satisfactory growth the previous year, due to a fungus disease known as leaf-spot or shot-hole fungus.

Infected leaves at first turn yellow or are marked with small brown spots which later drop out giving the "shot hole" effect. When the attack is severe the growth is checked by early defoliation and failure of the trees to set fruit buds for the succeeding crop.

This trouble can be entirely overcome by spraying the trees with 3-3-50 Bordeau mixture as soon as the petals fall, a second spraying two weeks later and a third spraying as soon as the crop is harvested.

Experimental work done last year by the Bureau of Plant Industry, Pennsylvania Department of Agriculture, at Northeast indicates that a sulphur-lead dust consisting of 90 percent sulphur and 10 percent arsenate of lead applied at the periods indicated will also control the disease. Those experiments are being repeated this year so that more definite conclusions on the value of dusting can be drawn.

GRAPE GROWERS MEET

The joint meeting of managers and members of National Grape Growers Association held June 23 at the Hollenden Hotel, Cleveland, Ohio, was a get-together success and all present were intensely optomistic for prospects of closer co-operation from now on owing to a perfect understanding, resulting from this meeting.

Representatives from Michigan, New York and Ohio predict the coming crop will be about normal altho some damage to the tender shoots was done by the recent wind and storms.

WORMY RADISHES UNNECESSARY

Wormy radishes, turnips and damage to other members of this botanical family by the cabbage magot can be prevented absolutely by using a sweetened poison bait to attract and kill the adults before they lay their eggs in the ground about the plants.

Dissolve one-fourth of an ounce of sodium arsenite or white arsenic in one gallon of boiling water and add one-half pint of black New Orleans molasses. Then, to make it especially attractive, chop up a few radishes, turnips or some cabbage and let it soak for a few hours in the poisoned bait.

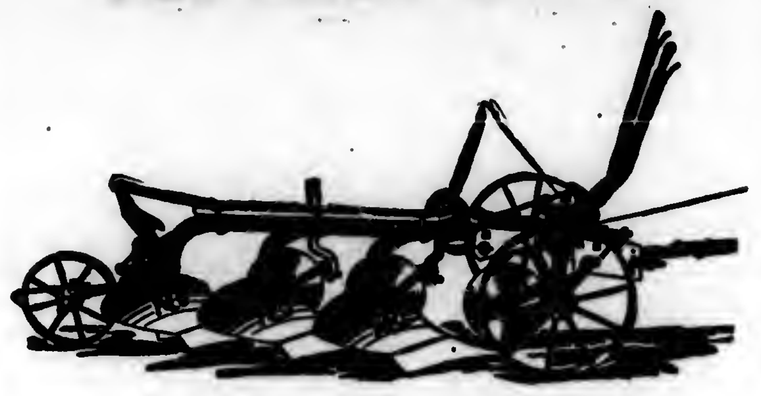
To apply, distribute it over the radish or turnip patch in big drops by means of a whisk broom or use a bunch of weeds. Applications should be made once a week for the first two or three weeks when the plants are young.

SAVE THE ONIONS

Maggots in the onions and loss to crops are entirely unnecessary. For information regarding the prevention of them write to the Bureau of Plant Industry, Pennsylvania Department of Agriculture, Harrisburg.

When cities are boasting of their increasing population, they want to remember that much of the increases comes from the farms; and that farm folks who are in the cities are not producing food for city folks to eat.

"The Little Genius"



A Name to Conjure With

THIS PLOW was built, tried in the field, and then christened. Hence the name, "Little Genius." No farm implement was ever more aptly named. And no other plow ever gained the success and popularity attained by the P&O Little Genius Power-Lift Tractor Plow.

A "One-Man" Outfit

The Little Genius is controlled by the tractor operator. The plow has a power-lift mechanism, and the bottoms are raised and lowered by means of one rope. The *tractor and plow* comprise a *one-man outfit.*

Lives Up to Its Reputation

Praises given this famous plow continue to resound in every section of the country. But the Little Genius is here to back up any statements. It is a model of mechanical construction, noted for simplicity of design, great strength, and the ease and accuracy of its work.

Two and Three Furrow
12 or 14-inch Bottoms.

Four Furrow
10 or 14-inch Bottoms.

Ask the International Dealer for Catalog on "P&O Light Draft Plows."

The making of a plow involves several fundamental principles: Design, Simplicity, Strength, Ease of Operation, and Economy. All of these will be found in the old reliable

P&O Light Draft Plows

These plows not only have behind them a long and honorable record — over three-quarters of a century — but their worth and reputation has resulted in the development of a plow factory that ranks in size with the three or four largest in the country.

It was this record that induced the International Harvester Company, in 1919, to purchase the immense P&O plow factory at Canton, Illinois, and add its product to their other lines of farm-operating equipment.

International Service

Remember that when you buy P&O Light Draft Plows, you are not only getting the best plows made, but you are also arranging for the benefits of International Service. Every one of the 92 International Branch Houses and every one of the thousands of International Dealers in the United States operates a Service Station for your benefit.

It is a Service that is efficient, dependable, and everlasting.

IHC

INTERNATIONAL HARVESTER COMPANY
OF AMERICA
(INCORPORATED)
CHICAGO USA

NINE MONTHS TO PAY

Immediate possession on our liberal Easy Monthly Payment plan—the most liberal terms ever offered on a high grade bicycle.

FACTORY TO RIDER prices save you money. We make our bicycles in our own new model factory and sell direct to you. We put real quality in them and our bicycles must satisfy you.

44 STYLES, colors, and sizes to choose from in our famous RANGER line. Send for big, beautiful catalog.

Many parents advance the first payment and energetic boys by odd jobs—paper routes, delivery for stores, etc., make the bicycle earn money to meet the small Payments.

DELIVERED FREE on Approval and 30 DAYS TRIAL. Select the bicycle you want and terms that suit you—cash or easy payments.

TIRES wheels and parts for all bicycles—at half usual prices. SEND NO MONEY but write today for the big new catalog, prices and terms.

MEAD CYCLE COMPANY
Dept. T-78 Chicago

Contractors to the Government
TAPES
FOR TYING
CELERY ASPARAGUS
IN FAST COLORS
Hoffman-Corr Tape Mfg. Co.
312 Market Street, Philadelphia.

170 Acres $3100 with Crops, Horses, 14 Cattle, and poultry, pigs, machinery, wagons, tools, part of growing crops; settling estate; great bargain for quick buyer; near R. R. town; machine-worked fields, 25-cow pasture; wood, fruit, sugar maples; new cottage, hardwood floors, running water, maple shade, delightful lake view; big barn, running water, 2 poultry houses, everything for $3100, very easy terms. Details page 10 Strout's Big Illustrated Catalog Farm Bargains 33 States. Copy free. STROUT FARM AGENCY, 1422 B E. Land Title Bldg., Phila.

William R. Compton Co.
Government and Municipal Bon
Over a Quarter Century in this Business
14 Wall Street, New York
St. Louis Chicago
Cincinnati New Orleans

Cabbage Plants All the leading varieties, strong plants from field $1.25 per 1,000; $10.00 per 10,000.
Celery Plants 6 of the best kinds. Fine field-grown plants, $1.25 per 1,000; $10.00 per 10,000.
J. C. SCHMIDT, BRISTOL, PA.

Vegetable Plants Leading varieties. Cabbage, price per 100, 30c., per 500, 90c, per 1000, $1.50. Lots of 5000 or more, $1.25 per 1000. Cauliflower, 100, 65c; 500, $2.50; 1000, $4.00 Tomato, 100, 40c; 500, $1; 1000, $1.75; lots of 5000 or more, $1.50. Send for prices on all kinds of plants. C. E. FIELD, SEWELL, N. J.

BIG BERRIES FOR BIG PROFITS

Everybody prefers large fruits of all kinds and most people will pay twice as much for them.

Buckbee, Beal
Kevitt's Jubilee

are three new Strawberries which we offer to growers who appreciate the ready sale of extra large, tasty fruit.

You can make money with these new sorts—they're far better than the usual kind.

Send for illustrated catalogue P today.

William M. Hunt & Company
148 CHAMBERS STREET, NEW YORK CITY

Blue Buckle Union Made OverAlls

"Strong-for-Work"

Blue Buckles' freedom from bind or pull, their tough, enduring quality-materials and Union workmanship will convince you that better made and better wearing work clothes can't be bought!

Seams sewn with heavy-ply thread last the life of the garment; tack-stitching prevents rips and tears. Broad, easy, stay-up suspenders mean comfort. The real brass buttons and loops never rust!

Know what Blue Buckles give in work-comfort. Next overalls you buy, make 'em Blue Buckles!

Blue Buckle "Buddies" for children 4 to 16 years duplicate the men's garments in quality, pattern and workmanship. They're the best wearing play-garment sold in America.

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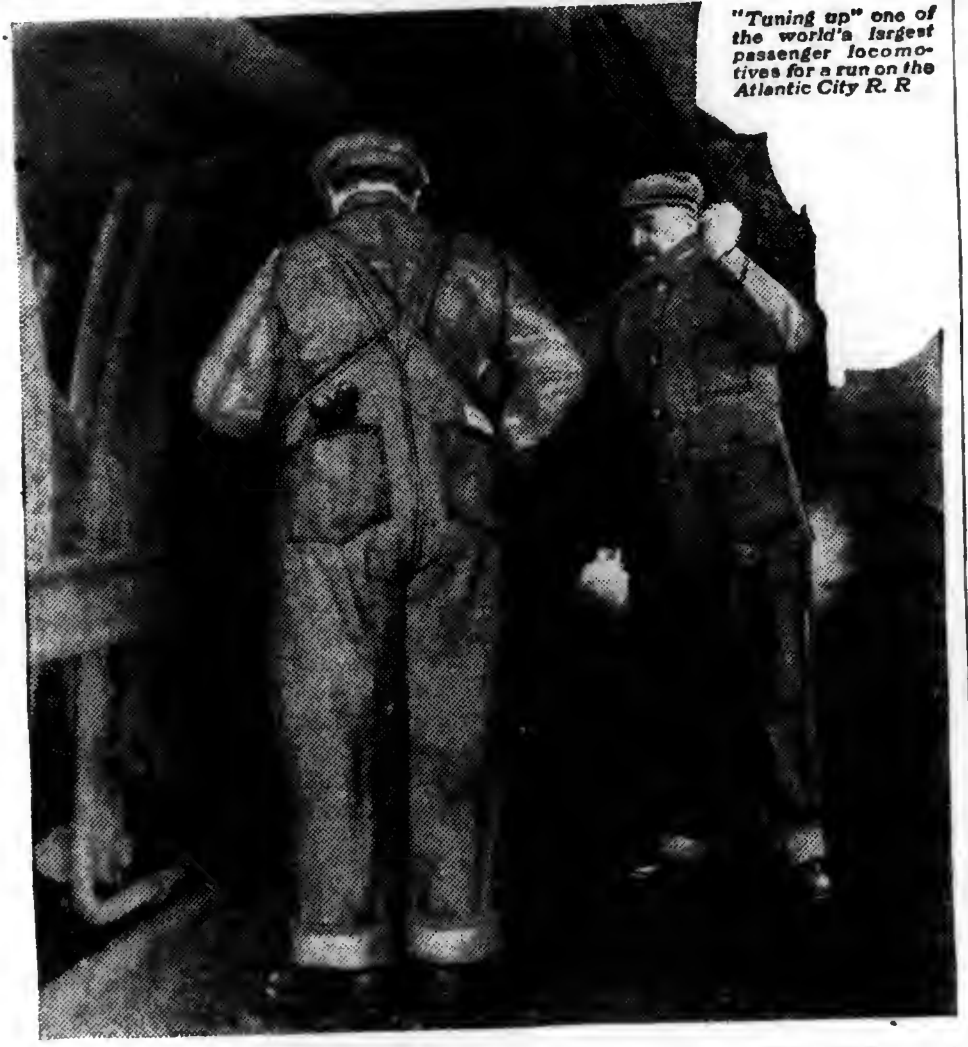
Ask your dealer for Blue Buckles

Jobbers Over All Co., Inc., Lynchburg, Va.

Largest manufacturers of overalls in the world



"Tuning up" one of the world's largest passenger locomotives for a run on the Atlantic City R. R

GOVERNMENT EXPERIMENTS IN FEEDING LAYING HENS

In the fall of 1912 the U. S. Department of Agriculture started experiments to note the effect of feeding on egg production, using six pens of 30 pullets each. The object was to find out what combination of rations composed of feeds generally available on farms thruout the country would give the most economical production.

Many of these pens have been kept on free range, while all of the confined pens have been given large yards. The object of allowing free range was to give the hens as nearly normal farm conditions as possible. Simple practical methods of feeding have been used where the labor item is reduced as low as it can be done economically. The fowls are only fed scratch feed twice a day, early in the morning and late in the afternoon, and a dry mash is kept in a simple open feed hopper before the hens all of the time.

Most of the tests are repeated under different conditions and in different years to make the results accurate and eliminate as far as possible the error due to the differences in individuals. No conclusions are drawn from short tests but all of the experiments are carried thru at least one year. All of the hens in these pens are trap-nested; the feed is weighed back each week, and the hens are weighed once a month, which gives us a careful check of conditions and shows us whether a few individuals in a pen are materially influencing the results of the entire pen. By using pens of 30 fowls each we are also able largely to reduce the chance of error due to differences in individuals.

One of the interesting experiments conducted on this farm which is of wide-reaching value to the general farmer shows the value of feeding meat scrap or some product of this nature to the farm flock. The average farmer feeds very little meat feed, milk, fish, or any animal protein of any kind to his poultry and consequently gets very few eggs during the late fall and winter when eggs are selling at the highest prices. We fed pens of pullets on free range a mash of corn meal, bran, and middlings and a scratch mixture of wheat, oats and corn. This is a greater variety of grains than is used by many farmers for tehir poultry and these birds had absolutely free range on land where there was a splendid chance to pick up bugs, green feed, worms, etc.. Other pens were given the same ration but with one pound of commercial meat scrap added to every four pounds of the mash. The pullets without the meat scrap laid only 90 eggs apiece, which is more than the average farm flock lays, while the pens receiving the meat scrap averaged from 125 to 150 eggs apiece. The meat scrap is not produced on the farm and has to be bought, selling at much higher prices than the grains, but even at this higher price it produced eggs several cents a dozen cheaper than where no meat scrap was used. The returns over feed cost were considerably greater from the meat scrap pens because they laid a far greater proportion of their eggs in the winter. Milk products will give just as good results as meat scrap and if the farmer does not have any milk to feed it will pay him to buy commercial meat scrp or tankage for his poultry.

Barred Rocks in Scratch Pen with Dry Mash Hopper

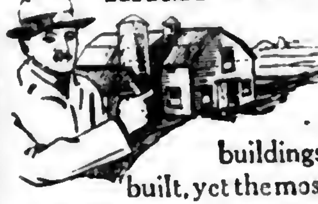
Leghorns Tearing Sprouted Oats to Pieces

Good feed, sunshine and exercise are needed by the growing pigs. See that yours have all three.

KILL
POULTRY LICE
WITH
Bee Brand
INSECT POWDER

McCORMICK & CO.
BALTIMORE, U. S. A.

HAMPTON METAL



Here are the longest-lived buildings that can be built, yet the most economical. Hampton Metal. Use it on the roof—the walls—"needs no paint." It will outlive galvanized iron or steel.
Hampton Metal is the exclusive product of the Penn Metal Co. Ltd. Deal direct and save time and money.
Shipment made twenty-four hours after order is received, delivery prepaid to nearest R. R. Station. Guaranteed to be as represented or money back.

HAMPTON SHEATHING STYLES:
Clap-board, Plain Brick Siding, Rock-face Stone, Rock-face Brick, Three-inch Beaded, Corrugated, 1¼ in. and 2½ in.

HAMPTON ROOFING STYLES:
Pressed Standing Seam, Roll Cap Roofing, 2 V. Crimp, 3 V. Crimp, Corrugated 1¼ in. and 2½ in.
The Hampton Brand is on every sheet.

Free Illustrated Book, Styles and Prices.
Send drawing marked with sizes of building.

PENN METAL COMPANY, Ltd.
Offices & Factory, 2500-50 Wharton St., Philadelphia.

PIPE second hand. Large stock all sizes furnished with new threads and couplings.
PROMPT SHIPMENT
J. F. Griffith, 416 Moyer St. Phila.

Largest Auto Wreckers in Pennsylvania
NEW AND USED PARTS FOR ALL CARS
At a discount of 30 to 75%
Mail orders promptly attended to.
Overland and Studebaker parts a specialty.
GREENE AUTO & PARTS CO.,
261 N. River Street, Wilkes-Barre, Pa.

CORN Harvester of Harvester. One man, one horse, one row. Self Gathering. Equal to a Corn Binder. Sold direct to Farmers for 28 yrs. Only $25 with fodder binder. Free Catalog showing pictures of Harvester. PROCESS CORN HARVESTER CO., Salina, Kan.

Send for Catalog

FARM WAGONS
High or low wheels—steel or wood—wide or narrow tires. Wagon parts of all kinds. Wheels to fit any running gear. Catalog illustrated in colors free.
Electric Wheel Co., 68 Elm St., Quincy, Ill.

HAY Ship To The Old Reliable House
Daniel McCaffrey's Sons
623-625 Wabash Bldg., Pittsburgh, Pa

POULTRY QUERIES

Young Ducks Die

"My young ducks seemed well when hatched, but soon become stupid. Their eyes coat over with a film. They live about a week and then die. They are fed oat meal and cracked corn and are given plenty of water but they do not care to drink."
—G. B. R., Susquehanna Co., Pa.

There is usually little trouble in starting ducklings provided the breeding stock is sound and vigorous. Of course, they are subject to some chick ailments such as lice, indigestion, damp quarters, etc. They must have grit from the first and this should be placed in the bottom of the drink vessel. The water must be deep enough so they can emerse their bills and clean their nostrils of feed particles. Give them green feed from the first, and we would suggest wheat instead of oat meal.

Gapes

A subscriber signing himself L. A. C. says that his chicks are troubled with gapes every year and wants a remedy.

If we could find a sure remedy for gapes we could make our everlasting fortune. It is said that gapes and white diarrhea carry off half the chicks hatched annually. The gape worm is hatched from a minute egg which is usually hatched in the soil or litter where chickens have been kept. There is no complete and satisfactory cure for a case of gapes. Sometimes a victim can be saved by looping a hair from a horse's tail, inserting it into the wndpipe, twisting it between thumb and finger and withdrawing it. However, the only satisfactory thing to do is to rid the premises of gape worms. This may be done by treating the soil to a heavy coat of lime, spading or plowing it deeply, then give another coat of lime. The houses, runaways, feed troughs, etc., should also be cleaned. Change their drinking water frequently.

White Diarrhea (?)

"I have such bad luck with my little chicks. They are a little over a week old and are dying rapidly. Their heads draw back over their backs and they seem stupid."—Mrs. R. E. S., Indiana Co., Pa.

The description is too meager to do more than guess at the trouble. Chicks are inclined to lay their heads back on their bodies with many ailments. It is possible that the trouble is white diarrhea, a disease that may come into the world with the chick, or, it may be infected by taking the germs with its food from poluted ground. When coops, runways, soil, etc., once become infected with the germs it takes heroic methods to clean it up. All floors, drinking vessels, feed boards, etc., should be scalded and afterwards treated with a disinfectant. It is safest to set eggs from a flock that was not troubled with white diarrhea last year. In any event it is safest to let the first feed be thick sour milk and keep this before them all the time.

The 12,000 members of boys' and girls' clubs in Nebraska estimate the total value of their products for the past year at $98,000 and their net returns at $47,000.

Mary had a swarm of bees
And they to save their lives
Went everywhere that Mary went
For Mary had the hives.

When You Buy a Fordson Buy a Little Giant Belt

At the time you place your order for a Fordson Tractor order a Little Giant belt to go with it.

It is just as important to get this belt as it is to get your plow, for if you are farming efficiently, if you are going to get the greatest value for your investment in your tractor, belt work will form 40% of your tractor's operations.

It is highly important that you get the right belt. The belt that will deliver full power from your Fordson, the belt that has been especially designed for use with the Fordson tractor is the Little Giant Tractor belt.

The Little Giant tractor belt is a stitched canvas, endless belt and is made in three lengths—50 ft., 75 ft. and 100 ft. It grips the belt pulley in a way that eliminates slippage and loss of power and is so treated that it will withstand any sort of weather or climatic conditions and the exposure that a belt must endure in operating farm machinery. Extra stitching on the edges practically eliminates all the effect of edge wear and its special design makes the Little Giant run straight and true, always.

Get a Little Giant tractor belt from your Fordson dealer at the time you buy your Fordson tractor, or get it now if you have not already done so.

United States Rubber Company
Mechanical Goods Division
Distributed by
GASH-STULL & CO., Philadelphia, Pa.

For sale by all authorized Fordson Dealers

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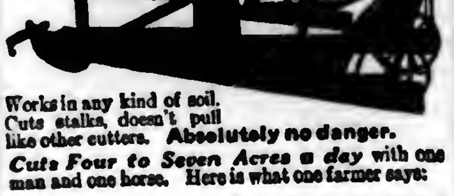

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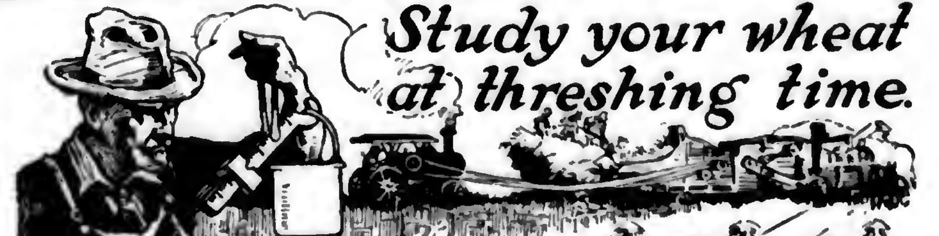
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HOUSEHOLD

PLENTY OF GOOD CHEESE

On every farm where cows are kept there is a surplus of skimmilk that could easily be made into Cottage Cheese. This is often neglected because the housewife knows no other way of serving the cheese other than as a dry or "wet" mass seasoned maybe with a little salt and pepper. Consequently the family loses a food that is as valuable for muscle and bone building as either meat or eggs. The whey left over from making the cheese is also valuable because it contains much of the lime and other mineral salts found in whole milk. It may be used in any recipe calling for sour milk as well as in some recipes for desserts and pudding sauces.

Creamy Eggs With Cottage Cheese

Make a thick white sauce with 1 cup milk, 1 tablespoon flour, 1 tablespoon butter, a little salt, paprika and pepper. Cook 5 minutes and pour gradually on 1 cup of cottage cheese, which has been neutralized with ½ teaspoon soda dissolved in a little milk. When the cheese and sauce are well blended, return to the double boiler and reheat. Beat 4 eggs slightly, pour them into the warm sauce and mix well. As the mixture sets, scrape it up carefully so it will form large, soft curds. The mixture is cooked sufficiently when creamy thru out.

Cottage Cheese Omelet

Beat the yolks and whites of two eggs separately. Add to the yolks ½ teaspoon salt, 2 tablespoons milk and 3 rounded tablespoons cottage cheese well blended with ⅛ teaspoon soda, and 1 tablespoon chopped pimentoes. Fold in the stiffly beaten egg whites, pour into a hot frying pan in which has been melted about ½ tablespoon fat. Cook like ordinary omelet.

Cottage Cheese Toast

Make a white sauce of 2 tablespoons fat, 2 tablespoons flour, ½ teaspoon each of salt and pepper and a large cup of milk. Beat in ½ cup of cottage cheese, and pour onto slices of toasted bread. Garnish with parsley and serve at once.

"Rinktum Ditty"

Four tablespoons flour, 2 tablespoons fat, 1 cup milk, salt and pepper, 1 cup tomato juice, 1½ cups cottage cheese, 1 egg. Make a white sauce of the flour, fat, milk and seasonings; add the tomato juice slowly, then the cottage cheese and egg well beaten. Pour onto buttered toast, and serve at once.

Cottage Cheese Balls

Make ½ cup of thick white sauce, and gradually beat into it 2 cups of cottage cheese. Add 2 cups mashed potatoes season and make into soft balls; then roll in bread crumbs, dip in beaten egg, then in bread crumbs again, and fry in deep fat until a golden brown. These cheese balls, served with a tomato sauce make a delicious supper dish.

Pineapple and Cottage Cheese Salad

Lay slices of pineapple on a bed of lettuce leaves, fill the center of the cored slices with small balls of cottage cheese seasoned with salt and paprika; garnish with strips of pimento and serve with Mayonnaise dressing. Halves of canned pears may be used instead of the pineapple.

Cottage Cheese Culb Sandwich

Make three good sized slices of toasted bread, spread with well seasoned cottage cheese, and put together with one of these combinations:

Sliced tomato, lettuce and Mayonnaise dressing, sliced oranges, watercress and Mayonnaise dressing, sliced onion, pimento, lettuce and Mayonnaise dressing; or two tiny strips of bacon, lettuce and Mayonnaise dressing.

Fried Bread With Cottage Cheese

Season a quantity of cottage cheese with salt and paprika, add a little scraped onion and well chopped pimientoes. Spread thickly on slices of stale bread, put two slices together, dip in egg and milk, and fry quickly in hot fat.

Cottage Cheese Pie

Two tablespoons butter, 2 tablespoons cornstarch, ½ teaspoon salt; blend thoroly, add ⅔ cup milk and stir until boiling, add ½ cup white corn syrup, 1 cup cottage cheese, 3 egg yolks beaten lightly, and the grated rind of 1 lemon. Mix all together and turn into a pie plate lined with plain pie crust. Bake until the mixture is firm. Make a meringue of the stiffly beaten egg whites and 5 tablespoons granulated sugar. Heap over the pie and brown delicately in a very slow oven.

Pineapple Whip

Beat 1 cup of smooth cottage cheese well with top milk until it has the consistency of whipped cream. Add ⅛ teaspoon soda to neutralize the acid, and then add sugar to sweeten. Whip in 2 cups of canned shredded pineapple, chill and serve as a dessert. This is delicious.

Whey Honey

Boil 1 cup of whey and ⅓ cup sugar together until it is of the consistency of strained honey. Pour into bottles, seal and keep for spreading on waffles or pancakes. Made a little thinner, it is excellent sauce for steamed puddings.—Mrs. F. W. Stillman, Union Co., N. J.

LESS SUGAR IN JELLIES, ETC.

The high price and difficulty of obtaining sugar need not deter housewives from making jellies, jams and fruit butters. Good jelly may be made by using corn syrup and half sugar. For 1½ cups of fruit juice use ½ cup syrup and ½ cup granulated sugar.

Gather the fruit when slightly green. It will require less sugar to make it form jelly at this time. Also, for the same reason, it should be gathered on a bright sunshiny day.

First boil the fruit, using only enough water to keep soft juicy fruit from scorching, and enough to cover the hard fruits like apples and quinces.

When cooked, drain the juice from the fruit and put it into an enameled pan, so that it is a little more than an inch in depth. Boil this juice 10 to 15 minutes, add the corn syrup and sugar and cook 10 minutes longer, or until the mixture will jelly. Pour it into clean glasses. This jelly will keep as well as that made with sugar alone.

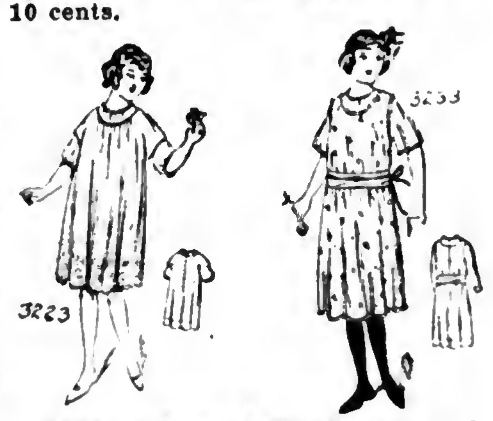
Economical fruit jams may be made from the pulp of fruit. The fruit may be riper for jams than for jelly. Cook the fruit until it is very thick, then add only enough sugar and corn syrup enough to make it have a sweetened taste. ⅓ cup sugar and ½ cup corn syrup will make a cupful of concentrated fruit pulp—taste sweet and give it a jelly-like consistency. Less sugar may be used if the fruit is naturally sweet.

Apple butter and other fruit butters can be cooked so thick that no sugar is needed to give the consistency needed. When the fruit is very acid, a tablespoonful of sugar per one cup of the fruit butter improves its flavor, but some of the best fruit butters are made of the concentrated fruit without sugar. They are sometimes flavored with lemon rind, cinnamon or a little clove according to taste. The best apple butter is that in which cider instead of water is used in first cooking the apples.—Edith Allen.

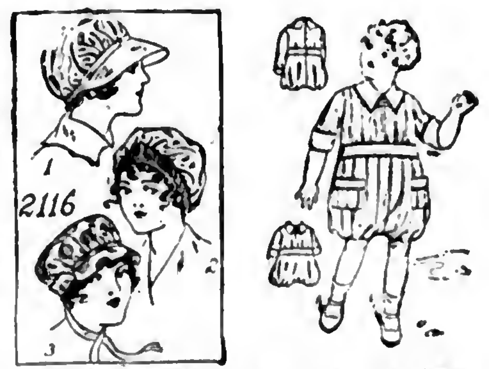
PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct fitting of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

3223.—Guimpe Dress. — Pattern comes in 4 sizes: 4, 6, 8 and 10 years. A 6-year size will require 2 yards of 27-inch material for the guimpe, and 2½ yards for the overdress. Pattern, 10 cents.



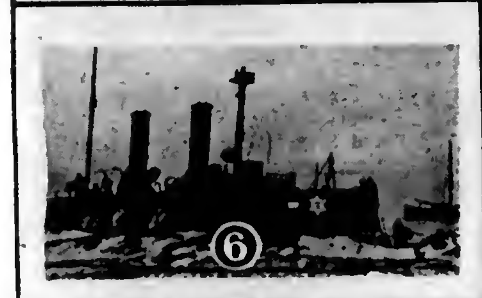
3233—Becoming Frock For Girl. —Pattern is cut in 5 sizes: 4, 6, 8, 10 and 12 years. A 10-year size will require 2 yards of 27-inch material for the guimpe, and 3 yards for the dress. As here shown, embroidered batiste was used, with frills of organdie for trimming. Pattern, 10 cents.

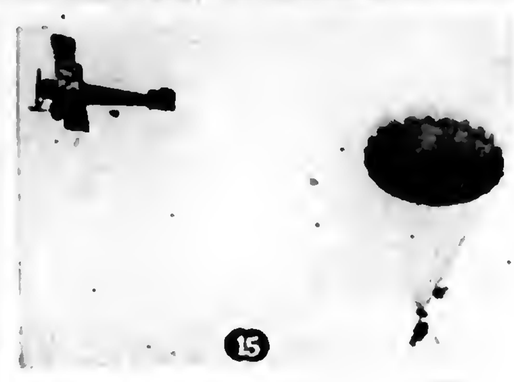


2116.—A Set of Serviceable Caps. —These models are nice for silk, satin, poplin, cravenette and other rubberized cloth. They are ideal for motoring and traveling.

The Pattern includes the three styles portrayed. It it cut in 2 sizes: Medium and Large. No. 1 will require 1 yard, No. 2 will require ⅞ yard, No. 3 will require ⅞ yard of 27-inch material for the medium size. A pattern of this illustration mailed to any address on receipt of 10 cents in silver or stamps.

PASSING EVENTS IN PICTURES





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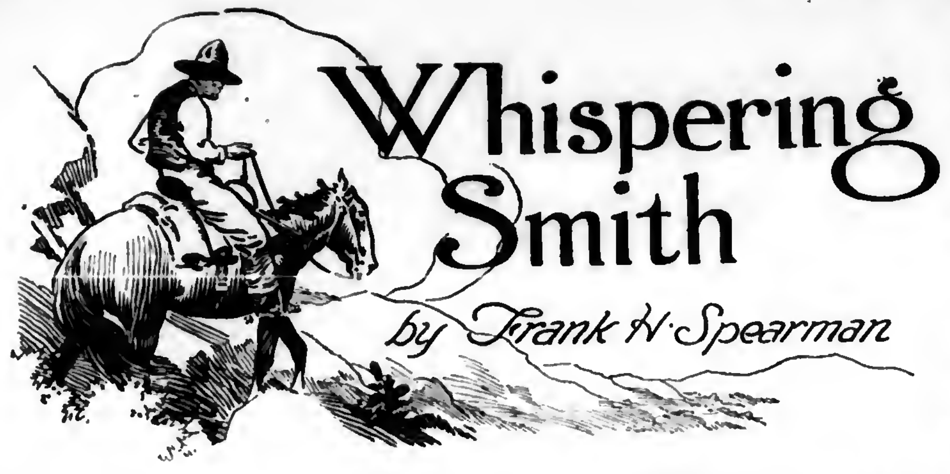
1—Chevy Chase Links where Senators play golf
2—20th Century couple start their Honeymoon
3—Irish Flax Spinners attract Crowds at the Royal Dublin Society's Agricultural Show.
4—Blue Ribbon Winner at Devon County Fair.
5—Motor Car and Speedy Boat in One.
6—German Cruiser ready for wrecking crew.
7—A Clean Finish of High Hurdles by Doppel.
8—A Southern Pine Starting its Journey.
9—Famous Landmark in Rotterdam, Holland, Built in 1776 now being torn down.
10—British and Arab Troops keep order in Jerusalem during Holy Week Festivities.
11—A lost Purebred Fox Terrier.
12—Field Marshall French presents Ypres with English Military Cross.
13—Where has my doggie Gone?
14—Miss Janice Liggett riding her mount over the Barrier at Chestnut Hill Horse Show.
15—Miss Marshall making a successful descent from airplane at Bournemouth, England.



Whispering Smith

by Frank H. Spearman

CHAPTER XV

The Shot in the Pass

Dicksie walked hurriedly thru the dining-room and out upon the rear porch. Her horse was standing where she had left him. Her heart beat furiously as she caught up the reins, but she sprang into the saddle and rode rapidly away. The flood of her temper had brought a disregard of consequence; it was in the glow of her eyes, the lines of her lips, and the tremor of her nostrils as she breathed long and deeply on her flying horse.

When she checked Jim she had ridden miles, but not without a course nor without a purpose. Where the roads ahead of her parted to lead down the river and over the Elbow Pass to Medicine Bend, she halted within a clump of trees almost where she had first seen McCloud. Beyond the Mission Mountains the sun was setting in a fire like that which glowed under her eyes. She could have counted her heart-beats as the crimson ball sank below the verge of the horizon and the shadows threw up the silver thread of the big river and deepened across the heavy green of the alfalfa fields. Where Dicksie sat, struggling with her bounding pulse and holding Jim tightly in, no one from the ranch or, indeed, from the up-country could pass her unseen. She was waiting for a horseman, and the sun had set but a few minutes when she heard a sharp gallop coming down the upper road from the hills.

All her brave plans, terror-stricken at the sound of the hoof-beats, fled from her utterly. She was stunned by the suddenness of the crisis. She had meant to stop McCloud and speak to him, but before she could summon her courage a tall, slender man on horseback dashed past within a few feet of her. She could almost have touched him as he flew by, and a horse less steady than Jim would have shied under her. Dicksie caught her breath. She did not know this man—she had seen only his eyes, oddly bright in the twilight as he passed—but he was not of the ranch. He must have come from the hill road, she concluded, down which she herself had just ridden. He was somewhere from the North, for he sat on his horse like a statue and rode like the wind.

But the encounter nerved her to her resolve. Some leaden moments passed, and McCloud, galloping at a far milder pace toward the fork of the roads, checked his speed as he approached. He saw a woman on horseback waiting in his path.

"Mr. McCloud!"

"Miss Dunning!"

"I could not forgive myself if I waited too long to warn you that threats have been made against your life. Not of the kind you heard today. My cousin is not a murderer, and never could be, I am sure, in spite of his talk; but I was frightened at the thought that if anything dreadful should happen his name would be brought into it. There are enemies of yours in this country to be feared, and it is against these that I warn you. Good-night!"

"Surely you won't ride away without giving me a chance to thank you!" exclaimed McCloud. Dicksie checked her horse. "I owe you a double debt of gratitude," he added, "and I am anxious to assure you that we desire nothing that will injure your interests in any way in crossing your lands."

"I know nothing about those matters, because my cousin manages everything. It is growing late and you have a good way to go, so good-night."

"But you will allow me to ride back to the house with you?"

"Oh, no, indeed, thank you!"

"It will soon be dark and you are alone."

"No, no! I am quite safe and I have only a short ride. It is you who have far to go," and she spoke again to Jim, who started briskly.

"Miss Dunning, won't you listen just a moment? Please don't run away!" McCloud was trying to come up with her. "Won't you hear me a moment? I have suffered some little humiliation today; I should really rather be shot up than have more put on me. I am a man and you are a woman, and it is already dark. Isn't it for me to see you safely to the house? Won't you at least pretend I can act as an escort and let me go with you? I should make a poor figure trying to catch you on horseback——"

Dicksie nodded naively. "With that horse."

"With any horse—I know that," said McCloud, keeping at her side.

"But I can't let you ride back with me," declared Dicksie, urging Jim and looking directly at McCloud for the first time. "How could I explain?"

"Let me explain. I am famous for explaining," urged McCloud, spurring too.

"And will you tell me what I should be doing while you were explaining?" she asked.

"Perhaps getting ready a first aid for the injured."

"I feel as if I ought to run away," declared Dicksie, since she had clearly decided not to. "It will have to be a compromise, I suppose. You must not ride farther than the first gate, and let us take this trail instead of the road. Now make your horse go as fast as you can and I'll keep up."

But McCloud's horse, tho not a wonder, went too fast to suit his rider, who divided his efforts between checking him and keeping up the conversation. When McCloud dismounted to open Dicksie's gate, and stood in the twilight with his hat in his hand and his bridle over his arm, he was telling a story about Marion Sinclair, and Dicksie in the saddle, tapping her knee with her bridle-rein, was looking down and past him as if the light upon ihs face were too bright. Before she would start away she made him remount, and he said good-by only after half a promise from her that she would show him sometime a trail to the top of Bridger's eak, with a view of the Peace River on the east and the whole Mission Range and the park country on the north. Then she rode away at an amazing run, nodding back as he sat still holding his hat above his head.

McCloud galloped toward the pass with one determination—that he would have a horse, and a good one, one that could travel with Jim, if it cost him his salary. He exulted as he rode, for the day had brought him everything he wished, and humiliation had been swallowed up in triumph. It was nearly dark when he reached the crest between the hills. At this point the southern grade of the pass winds sharply, whence its name, the Elbow; but from the head of the pass the grade may be commanded at intervals for half a mile. Trotting down this road with his head in a whirl of excitement, McCloud heard the crack of a rifle; at the same instant he felt a sharp slap at his hat. Instinct works on all brave men very much alike. McCloud dropped forward in his saddle, and, seeking no explanation, laid his head down and spurred Bill Dancing's horse for life or death. The horse, quite amazed, bolted and swerved down the grade like a snipe, with his rider crouching close for a second shot. But no second shot came, and after another mile McCloud ventured to take off his hat and put his finger thru the holes in it, tho he did not stop his horse to make the examination. When they reached the open country the horse had settled into a fast, long stride that not only redeemed his reputation but relieved his rider's nerves.

When McCloud entered his office it was half-past nine o'clock, and the first thing he did before turning on the lights was to draw the window-shades. He examined the hat again, with sensations that were new to him—fear, resentment, and a hearty hatred of his enemies. But all the while the picture of Dicksie remained. He thought of her nodding to him as they parted in the saddle, and her picture blotted out all that had followed.

CHAPTER XVI

◆

At the Wickiup

Two nights later Whispering Smith rode into Medicine Bend. "I've been up around Williams Cache," he said, answered McCloud's greeting as he entered the upstairs office. "How goes it?" He was in his riding rig, just as he had come from a late supper.

When he asked for news McCloud told him the story of the trouble with Lance Dunning over the survey, and added that he had referred the matter to Glover. He told then of his unpleasant surprise when riding home afterward.

"Yes," assented Smith, looking with feverish interest at McCloud's head; "I heard about it."

"That's odd, for I haven't said a word about the matter to anybody but Marion Sinclair, and you haven't seen her."

"I heard up the country. It is great luck that he missed you."

"Who missed me?"

"The man that was after you."

"The bullet went thru my hat."

"Let me see the hat."

McCloud produced it. It was a heavy, broad-brimmed Stetson, with a bullet-hole cut cleanly thru the front and the back of the crown. Smith made McCloud put the hat on and describe his position when the shot was fired. McCloud stood up, and Whispering Smith eyed him and put questions.

"What do you think of it?" asked McCloud when he had done.

Smith leaned forward on the table and pushed McCloud's hat toward him as if the incident were closed. "There is no question in my mind, and there never has been, but that Stetson puts up the best hat worn on the range."

McCloud raised his eyebrows. "Why, thank you! Your conclusion clears things so. After you speak a man has nothing to do but guess."

"But, by Heaven, George," exclaimed Smith, speaking with unaccustomed fervor, "Miss Dicksie Dunning is a hummer, isn't she? That child will have the whole range going in another year. To think of her standing up and lashing her cousin in that way when he was browbeating a railroad man!"

"Where did you hear about that?"

"The whole Crawling Stone country is talking about it. You never told me you had a misunderstanding with Dicksie Dunning at Marion's. Loosen up!"

"I will loosen up in the way you do. What scared me most Gordon, was waiting for the second shot. Why didn't he fire again?"

"Doubtless he thought he had you the first time. Any man big enough to start after you is not used to shooting twice at two hundred and fifty yards. He probably thought you were falling out of the saddle; and it was dark. I can account for everything but your reaching the pass so late. How did you spend all your time between the ranch and the foothills?"

McCloud saw there was no escape from telling of his meeting with Dicksie Dunning, of her warning, and of his ride to the gate with her. Every point brought a suppressed exclamation from Whispering Smith. "So she gave you your life," he mused. "Good for her! If you had got into the pass on time you could not have got away—the cards were stacked for you. He overestimated you a little, George; just a little. Good men make mistakes. The sport of circumstances that we are! The sport of circumstances!"

"Now tell me how you heard so much about it, Gordon, and where?"

"Thru a friend, but forget it."

"Do you know who shot at me?"

"Yes."

"I think I do, too. I think it was the fellow that shot so well with the rifle at the barbecue—what was his name? He was working for Sinclair, and perhaps is yet."

"You mean Seagrue, the Montana cowboy? No, you are wrong. Seagrue is a man-killer, but a square one."

"How do you know?"

"I will tell you sometime—but this was not Seagrue."

"One of Dunning's men, was it? Stormy Gorman?"

"No, no, a very different sort! Stormy is a wind-bag. The man that is after you is in town at this minute, and he has come to stay until he finishes his job."

"The devil! That's what makes your eyes so bright, is it? Do you know him?"

"I have seen him. You may see him yourself if you want to."

"I'd like nothing better. When?"

"To-night—in thirty minutes. McCloud closed his desk. There was a rap at the door.

"That must be Kennedy," said Smith. "I haven't seen him, but I sent word for him to meet me here." The door opened and Kennedy entered the room.

"Sit down, Farrell," said Whispering Smith easily. "Ve gates?"

"How's that?"

"Wic geht es? Don't pretend you can't make out my German. He is trying to let on he is not a Dutchman," observed Whispering Smith to McCloud. "You wouldn't believe it, but I can remember when Farrell wore wooden shoes and lighted his pipe with a candle. He sleeps under a feather-bed yet. Du Sang is in town, Farrell."

"Du Sang!" echoed the tall man with mild interest as he picked up a ruler and, throwing his leg on the edge of the table, looked cheerful. "How long has Du Sang been in town? Visiting friends or doing business?"

"He is after your superintendent. He has been here since four o'clock, I reckon, and I've ridden a hard road today to get in in time to talk it over with him. Want to go?"

Kennedy slapped his leg with the ruler. "I always want to go, don't I?"

"Farrell, if you hadn't been a railroad man you would have made a great undertaker, do you know that?" Kennedy, slapping his leg, showed his ivory teeth. "You have such an instinct for funerals," added Whispering Smith.

"Now, Mr. Smith! Well, who are we waiting for? I'm ready," said Kennedy, taking out his revolver and examining it.

McCloud put on his new hat and asked if he should take a gun. "You are really accompanying me as my guest, George," explained Whispering Smith reproachfully. "Won't it be fun to shove this man right under Du Sang's nose and make him bat his eyes?" he added to Kennedy. "Well, put one in your pocket if you like, George, provided you have one that will go off when sufficiently urged."

McCloud opened the drawer of the table and took from it a revolver. Whispering Smith reached out his hand for the gun, examined it, and handed it back.

"You don't like it."

Smith smiled a sickly approbation. "A forty-five gun with a thirty-eight bore, George? A little light for shock; a little light. A bullet is intended to knock a man down; not necessarily to kill him, but, if possible, to keep him from killing you. Never mind, we all have our fads. Come on!"

At the foot of the stairs Whispering Smith stopped. "Now I don't know where we shall find this man, but we'll try the Three Horses." As they started down the street McCloud took the inside of the sidewalk, but Smith dropped behind and brought McCloud into the middle. They failed to find Du Sang at the Three Horses, and leaving, started to round up the street. They visited many places, but each was entered in the same way. Kennedy sauntered in first and moved slowly ahead. He was to step aside only in case he saw Du Sang. McCloud in every instance followed him, with Whispering Smith just behind, amiably surprised. They spent an hour in and out of the Front Street resorts, but their search was fruitless.

"You are sure he is in town?" asked Kennedy. The three men stood deliberating in the shadow of a side street.

"Sure!" answered Whispering Smith. "Of course, if he turns the trick he wants to get away quietly. He is lying low. Who is that, Farrell?" A man passing out of the shadow of a shade tree was crossing Fort Street a hundred feet away.

"It looks like our party," whispered Kennedy.

"No, stop a bit!" They drew back into the shadow. "That is Du Sang," said Kennedy; "I know his hobble."

CHAPTER XVII

A Test

Du Sang had the sidewise gait of a wolf, and crossed the street with the choppy walk of the man out of a long saddle. Being both uncertain and quick, he was a man to slip a trail easily. He travelled around the block and disappeared among the many open doors that blazed along Hill Street. Less alert trailers than the two behind him would have been at fault; but when he entered the place he was looking for, Kennedy was so close that Du Sang could have spoken to him had he turned around.

Kennedy passed directly ahead. A moment later Whispering Smith put his head inside the door of the joint Du Sang had entered, withdrew it, and, rejoining his companions, spoke in an undertone: "A negro dive; he's lying low. Now we will keep our regular order. It's a half-basement, with a bar on the left; crap games at the table behind the screen on the right. Kennedy, will you take the rear end of the bar? It covers the whole room and the back door. George, pass in ahead of me and step just to the left of the slot machine; you've got the front door there and everything behind the screen, and I can get close to Du Sang. Look for a thinnish, yellow-faced man with a brown hat and a brown shirt—and pink eyes—shooting craps under this window. I'll shoot craps with him. Is your heart pumping, George? Never mind, this is easy! Farrell, you're first!"

The dive, badly lighted and ventilated, was counted tough among tough places. White men and colored mixed before the bar and about the tables. When Smith stepped around the screen and into the flare of the hanging lamps, Du Sang stood in the small corner below the screened street window. McCloud, tho vitally interested in looking at the man that had come to town to kill him, felt his attention continually wandering back to Whispering Smith. The clatter of the rolling dice, the guttural jargon of the negro gamblers, the drift of men to and from the bar, and the clouds of tobacco smoke made a hazy background for the stoop-shouldered man with his gray hat and shabby coat, dust-covered and travel-stained. Industriously licking the broken wrapper of a cheap cigar and rolling it fondly under his forefinger, he was making his way unostentatiously toward Du Sang. Thirty-odd men were in the saloon, but only two knew what the storm centre moving slowly across the room might develop. Kennedy, seeing everything and talking pleasantly with one of the barkeepers, his close-set teeth gleaming twenty feet away, stood at the end of the bar sliding an empty glass between his hands. Whispering Smith pushed past the on-lookers to the end of the table where Du Sang was shooting. He made no effort to attract Du Sang's attention, and when the latter looked up he could have pulled the gray hat from the head of the man whose brown eyes were mildly fixed on Du Sang's dice; they were lying just in front of Smith. Looking indifferently at the intrduer, Du Sang reached for the dice; just ahead of his right hand, Whispering Smith's right hand, the finger-tips extended on the table, rested in front of them; it might have been thru accident or it might have been thru design. In his left hand Smith held the broken cigar, and without looking at Du Sang he passed the wrapper again over the tip of his tongue and slowly across his lips.

Du Sang now looked sharply at him, and Smith looked at his cigar. Others were playing around the semi-circular table—it might mean nothing. Du Sang waited. Smith lifted his right hand from the table and felt in his waistcoat for a match. Du Sang, however, made no effort to take up the dice. He watched Whispering Smith scratch a match on the table, and, either because it failed to light or thru design, it was scratched the second time on the table, marking a cross between the two dice.

The meanest negro in the joint would not have stood that, yet Du Sang hesitated. Whispering Smith, mildly surprised, looked up. "Hello, Pearline! You shooting here?" He pushed the dice back toward the outlaw. "Shoot again!"

Du Sang, scowling, snapped the dice and threw badly.

"Up jump the devil, is it? Shoot again!" And pushing back the dice, Smith moved closer to Du Sang. The two men touched arms. Du Sang, threatened in a way wholly new to him, waited like a snake braved by a mysterious enemy. His eyes blinked like a badger's. He caught up the dice and threw. "Is that the best you can do?" asked Smith. "See here!" He took up the dice. "Shoot with me!" Smith threw the dice up the table toward Du Sang. Once he threw caps, but, reaching directly in front of Du Sang, he picked the dice up and threw eleven. "Shoot with me, Du Sang."

"What's your game?" snapped Du Sang, with an oath.

"What do you care, if I've got the coin? I'll throw you for twenty-dollar gold pieces."

Du Sang's eyes glittered. Unable to understand the reason for the affront, he stood like a cat waiting to spring. "This is my game!" he snarled.

"Then play it."

"Look here, what do you want?" he demanded angrily.

Smith stepped closer. "Any game you've got. I'll throw you left-handed, Du Sang.'" With his right hand he snapped the dice under Du Sang's nose and looked squarely into his eyes. "Got any Sugar Buttes money?"

Du Sang for an instant looked keenly back; his eyes contracted in that time to a mere narrow slit; then, sudden as thought, he sprang back into the corner. He knew now. This was the man who held the acres at the barbecue, the railroad man—Whispering Smith. Kennedy, directly across the table, watched the lightning-like move. For the first time the crap-dealer looked impatiently up.

It was a showdown. No one watching the two men under the window breathed for a moment. Whispering Smith, motionless, only watched the half-closed eyes. "Yon can't shoot craps," he said coldly. "What can you shoot, Pearline? You can't stop a man on horseback."

Du Sang knew he must try for a quick kill or make a retreat. He took in the field at a glance. Kennedy's teeth gleamed only ten feet away, and with his right hand half under his coat lapel he toyed with his watch-chain. McCloud had moved in from the slot machine and stood at the point of the table, looking at Du Sang and laughing at him. Whispering Smith threw off all pretence. "Take your hand away from your gun, you albino! I'll blow your head off left-handed if you pull! Will you get out of this town to-night? If you can't drop a man in the saddle at two hundred and fifty yards, what do you think you'd look like after a break with me? Go back to the whelp that hired you, and tell him when he wants a friend of mine to send a man that can shoot. If you are within twenty miles of Medicine Bend at daylight I'll rope you like a fat cow and drag you down Front Street!"

Du Sang with burning eyes, shrank narrower and smaller into his corner, ready to shoot if he had to, but not liking the chances. No man in Williams Cache could pull or shoot with Du Sang, but no man in the mountains had ever drawn successfully against the man that faced him.

Whispering Smith saw that he would not draw. He taunted him again in low tones, and, backing away, spoke laughingly to McCloud. While Kennedy covered the corner, Smith backed to the door and waited for the two to join him. They halted a moment at the door, then they backed slowly up the steps and out into the street.

There was no talk till they reached the Wickiup office. "Now, will some of you tell me who Du Sang is?" asked McCloud, after Kennedy and Whispering Smith with banter and laughing had gone over the scene.

Kennedy picked up the ruler. "The wickedest, cruelest man in the bunch—and the best shot."

"Where is your hat, George—the one he put the bullet thru?" asked Whispering Smith, limp in the big chair. "Burn it up; he thinks he missed you. Burn it up now. Never let him find out what a close call you had. Du Sang! Yes, he is cold-blooded as a wild-cat and cruel as a soft bullet. Du Sang would shoot a dying man, George, just to keep him squirming in the dirt. Did you ever see such eyes in a human being, set like that and blinking so in the light? It's bad enough to watch a man when you can see his eyes. Here's hoping we're done with him!"

(Continued Next Week.)

CAUSE FOR GLADNESS

Twas eventide. The boy stood on the bridge, clapping his hands vigorously. Beyond the brow of the hill a dull red glow suffused the sky.

"Ah, little boy," remarked the stranger who was rather near-sighted, "it does my heart good to see you appreciate yon beautiful cloud effect."

"Yes, sir," replied the lad. "I've been watching it for ten minutes." Upon the boys face there appeared a smile of radiant bliss.

"A real poet without a doubt. And do you watch the sunsets often, my little boy?"

"Sunsets? Why that ain't a sunset, gov'nor. That's the village school burning down."

TIME TO HUSTLE

Jack—"Will you live on my income?"

Dora—"Certainly, dearest, if——"

Jack—"If what?"

Dora—"If you get another one for yourself."

Markets

WEEK-END PRODUCE REVIEW

—July 3, 1920.

(Prices to Jobbers and Shipments for the Period of June 25 to July 1 inclusive.)

Price Movements Moderate

Price changes in leading commodities were irregular. Cantaloupes and watermelons advanced moderately while tomatoes values declined. Onions, peaches and new potatoes were relatively steady. Shipments of cantaloupes, peaches, and onions, showed slight increases but movement of potatoes, watermelons and new potatoes, decreased sharply.

New Potatoes Fairly Steady

Demand has been good at Virginia shipping points with haulings moderate. Irish Cobblers, No. 1 in cloth top stave barrels ranged $10.75@11.50, carloads f. o. b. Virginia potatoes ranged $10.50@13 per barrel in eastern markets and carlots in Chicago $10.75@13. Haulings were light and movement limited at North Carolina shipping points. Irish Cobblers, No. in cloth top stave and slat barrels ranged $9.25@10, carloads f. o. b. cash track and demand draft. Eastern markets ranged $10@12.50. South Carolina Irish Cobblers, No. 1, brought $10@12 per barrel in New York, Philadelphia and Pittsburgh. Carlots of Carolina potatoes in Chicago ranged $10@13. Alabama, Louisiana, Oklahoma and Texas Bliss Triumphs sold lower, closing at $5@6.50 in St. Louis per cwt. sacked and around $6 in Kansas City. Carlots of Bliss Triumphs in Chicago were lower at the close ranging $5.75@6.25. Shipments were 2,979 cars compared with 3,410 shipped the week before, a decrease of 430 cars.

Onion Movement Light

Yellow Bermuda onions continued slow and dull in consuming markets. Texas No. 1 and 2 ranged $1@1.40 per standard crate in eastern markets and $1@1.50 in middle western. California Yellow Bermudas were slow also in Philadelphia, Baltimore and Pittsburgh, ranging 75c@$1.35 per standard crate. Movement was light in Chicago, prices ranging $1@1.50. Shipments were 113 cars compared with 92 shipped during the previous week. Movement is chiefly from California.

Tomato Supply Decreases

Price changes in the tomato markets have been mostly downward. Green, wrapped, No. 1 tomatoes in 4-basket flats ranged $1@1.15 at Mississippi shipping points, carloads f. o. b. cash track. Fours, pink, unwrapped stock ranged $1.25@1.75 in Chicago. Mississippi turning and ripe stock wrapped ranged $1.50@2.25 per 4 basket flat in New York and Boston and $1.25@1.75 in Philadelphia, Baltimore and Pittsburgh. Prices declined at Texas shipping points to a closing range of 75@85 cents, carloads f. o. b. cash track for pink, unwrapped stock in 4 basket flats. Texas, pink, unwrapped tomatoes ranged $1.50@2 in Chicago and Kansas City, and closed in St. Louis at $1.25@1.50. Texas, turning and ripe, wrapped tomatoes, ranged $1.50@1.75 per 4 basket flat in Pittsburgh, $1.85@2 in Cincinnati and $1.50@2 in Detroit. Total shipments were 656 cars during the week compared with 1,144 cars the previous week, a decrease of approximately 500 cars. Mississippi and Texas are the heaviest shippers followed by Tennessee.

Cantaloupe Markets Show Improvement.

Haulings at California shipping points decreased during the first half of the week. Salmon Tints, standards 45s ranged $2@2.50, carloads f. o. b. cash track. Prices were higher in consuming markets, values making greater gains in cities of the east than in those of the middle west. California, Salmon Tints standards 45s gained 75 cents to $1.50 in eastern markets, closing $3.75@6. Middlewestern markets closed at $3.25@4.50, a gain of 25@50 cents per crate. Shipments were 1,685 cars compared with 1,643 cars shipped the week before, an increase of less than 50 cars. Movement continues almost entirely from Imperial Valley.

Peaches Steady

Demand and movement have been active at Georgia shipping points. Sixes and bushel baskets of Carmans ranged $2.25@2.50, and late sales of Miloys were around $2.75 carloads f. o. b. cash track. Georgia Carmans ranged $3.50@4.50 per 6-basket carrier, or bushel basket in New York, $3@4.25 in Philadelphia, $3@3.25 in Baltimore and $2.75@3.75 in Chicago. Georgia Dixie Queens in sixes and bushel baskets ranged $2.50@3.50 in consuming markets. Late sales of Early Rose and Red Birds were at $4@4.25 in Pittsburgh. These varieties ranged $4@5 in New York and $2.50@3.50 in Baltimore. Shipments increased moderately, movement being 457 cars compared with 362 the previous week

Watermelon Prices Higher

Early sales of Tom Watsons average 22@28 lbs. ranged $250@450 at Florida shipping points, carloads f. o. b. cash track to growers. Demand and movement were slow early in the week. Florida Tom Watsons average 26-28 lbs. closed at $350@450. Florida Tom Watsons in eastern markets showed a wide range in prices. Melons of average weight 22-28 lbs. ranged $400@1,000 bulk per car in New York and Philadelphia, $625@850 in Pittsburgh and $500@750 in Baltimore. Florida Tom Watsons in Chicago ranged $130@950. Shipments were 1,820 cars compared with 2,221 shipped during the preceding week, a decrease approximately 400 cars.

LANCASTER PRODUCE

—July 3, 1920.

Old potatoes entirely disappeared in the markets here Saturday, and new county potatoes which took their place were sold at 20 and 25 cents per quart box. Because of the holidays, Saturday's buying was exceptionally heavy and prices were held firm. Business was at a standstill today because of the "Fourth celebration."

Butter and Eggs.—Creamery butter, 75c lb.; country butter, 70@75c. Fresh eggs, 48@50c doz.; duck eggs, 55c; goose eggs, 6@7c each.

Poultry.—Dressed old chickens, $2.25@2.50 each; dressed young chickens, $1.90@2.10 each.

Vegetables.—Parsnips, 10c per box; spinach, 5@20c per ¼ pk.; new potatoes, 20@25c per quart; do., 35@45c per ½ pk; sweet potatoes, 50c per ½ pk.; cabbage, 10@25c head, cauliflower, 20@25c head; asparagus, 10c bunch; peas, 35@40c per ½ pk; beans, 35@40c per ½ pk.; rhubarb, 5@8c bunch; lettuce, 15@25c head.

Fruit.—Strawberries, 15@20c box; cherries, 20@25c quart; raspberries, 30@35c box; cantaloupes, 20@25c each.

YORK PRODUCE MARKETS

—July 3, 1920.

The markets of the city were filled to overflowing with all kinds of produce. Also, for the season, the prices were reasonable. Saturday was the end of the strawberry season, while it was also the beginning of the sour cherry and raspberry harvest. The latter are not large as usual on account of the drought in many parts of the county.

Eggs.—45@46c per dozen.

Butter.—Country, 60@65c lb.; separator, 65@75c; milk, 12c quart.

Vegetables.—Potatoes, 50@60c ½ pk; quite a few county tubers on the Friday and Saturday markets; cabbage, 10@15c head; lettuce 1@10c head; very plenty; beets, 5c bunch; radishes, 5c bunch; onions, 5c bunch; asparagus, 10@12c bunch; peas, 15@25c ½ pk.; beans, 25@50c ½ peck; ham, sliced, 40@85c lb.; whole, 40@45c lb.

Fruits.—Apples, 40@60c ½ peck; about cleaned up. New stock will be in this week. Strawberries, 15@20c box; cherries, 20@35c box; common black, 10@12c box; sour, 8@15c box; currants, 15@20c box; raspberries 20@25c box.

Retail Grain Market.—Wheat, $3.50; corn, $2.25; oats, $1.50; rye, $2; bran, $3.25 cwt., middlings, $3.75 cwt.

Wholesale Grain Market.—Wheat, $2.50; corn, $1.80; oats, $1.28; rye, $1.78; bran, $65 per ton; middlings, $70 per ton.

NEW YORK PRODUCE

—July 3, 1920.

Butter.—Easy; receipts, 14,848 tubs; creamery, higher than extras, 57¾@58c; creamery, extras (92 score), 58c; creamery, firsts (88 to 91 score), 53@57½c; packing stock, current make, No. 1, 42@42½c.

Eggs.—Irregular; receipts, 2,065 cases; fresh gathered, extra firsts, 47@49½c; firsts, 42@46c; state, Pennsylvania and nearby western hennery whites, firsts to extras, 55@60c; do., browns, extras, 55@56c; state, Pennsylvania and nearby hennery browns, extras, 43@51c.

Cheese.—Steady; receipts, 3,603 boxes; state, whole milk, flats, current make, white and colored, specials, 27½@28½c; do., average run, 26@27c; state, whole milk, twins, current make, specials 27¼@27¾c; do., average run, 26@26¾c.

Poultry.—Live and dressed, steady and unchanged.

PHILADELPHIA LIVESTOCK

—July 3, 1920.

Receipts for the week ending July 3rd, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Totals for week	2,369	7,644	9,391
Previous Week	2,380	7,667	10,176

Calves.—Receipts of calves were 2,428 head against 2,960 head previous week.

Beef Cattle.—In ample supply, quiet and easier. Quotations: Steers, good to choice, $15@16.75; fair to good, $13.50@15; common to fair, $12@13.50; cows, dairy, good to choice, 8½@10c; do., fair to good, 7@8½c; bulls, 8@11c; calves, extra to choice, $16.50@17; fair to good, $14@16; do., common, $11@13; Tennessee, $12@14; other southern, $6@10.

Sheep and Lambs.—Sold slowly and were lower in sympathy with draggy market for dressed meat. Sheared sheep, wethers, extra, $10@10.50; do., good to choice, $7.50@8.50; do., medium, $6@7; do., common, $2@3.50, ewes, heavy, fat, $10@11.50; lambs, spring, choice, $16@16.50; medium, $12@14; common, $8@10; lambs, sheared, choice, $10@11.50; do medium grades, $8@10; do., culls and common, $6@7.

Hogs.—In moderate supply and demand at revised figures. Quotations: Best western, $18.50@19; good, nearby, $16.75@17.25.

City Dressed Stock.—On account of the holiday there was little trading and market was generally lower under fairly liberal offerings. Quotations: Steers 22@28c; heifers, 18@26c; cows choice 20@23c; cows light 12@20c; calves city dressed choice 27@29c; calves, country dressed, 24@26c; lambs, spring, choice, 33@36c; do., winter choice, 28@32c; sheep, 15@25c.

LIVESTOCK MARKETS

—July 8, 1920.

NEW YORK.

Beeves.—Receipts, 850; no trading.

Calves.—Receipts, 350; weak; good Maryland calves, $9@14.50.

Sheep and Lambs.—Receipts, 4,050; lower: sheep (ewes), $5@8; culls, $3@4.50; lambs, $11@14.50; culls, $9@10.

Hogs.—Receipts, 2,025; no trading.

EAST BUFFALO N. Y.

Cattle.—Receipts, 600; slow.

Calves.—Receipts, 800; $1 lower, $6@16.

Hogs.—Receipts, 1,600; 25c lower: heavy, $16@16.25; mixed, $16.50@16.75; yorkers, $16.65@16.75; light yorkers, $15.50@16.50; pigs, $15@15.25; roughs, $13; stags, $8@10.

Sheep and Lambs.—Receipts, 1,000; slow, Lambs 50c lower. Lambs, $8@16.50; others unchanged.

CHICAGO ILL.

Cattle.—Receipts, 3,000; compared with a week ago, beef steers 50c to $1 lower; some warmed up and greasy kinds off more; choice corn-fed butcher stock 50c to 75c lower; others $1 to $1.50 lower.

Hogs.—Receipts, 9,000; slow, 25c to 65c lower than yesterday's average; bulk light and light butchers, $15.25@15.35; bulk, 250 lbs and over, $13.25@15.10.

Sheep.—Receipts, 3,000; bulk direct to packers; few sales steady.

PITTSBURGH PA.

Hogs.—Receipts, 2,500; higher; heavies, $16@16.25; heavy yorkers, $17@17.15; light yorkers, $15.50@16; pigs, $15@15.50.

Sheep and Lambs.—Receipts, 500; market lower; top sheep, $9.50; top lambs, $15.50.

Calves.—Receipts, 350; market lower; top, $16.50.

PHILADELPHIA DAIRY MARKET

—July 3, 1920.

Butter.—Receipts, 3,832 tubs. As usual on Saturday there was very little trading on the wholesale market and no important changes in the general situation. Quotations follow: Fresh, solid-packed creamery, high-scoring goods, 60½@62½c, the latter for jobbing sales; extras, 59½c; do., extra firsts, 56½@58½c; firsts, 51@55c; seconds, 45@50c; sweet creamery, choice to fancy, 61½@63½c; fair to good, 51@60½c; packed, as to quality, 44@46c; packing stock, 38@41c; fancy brands of nearby prints were jobbing at 68@70c; good to choice, 60@67c; fair, 57@59c.

Cheese.—Was quiet and unchanged. New York, whole-milk, current make, fancy flats, 27½@28c; common to fair, 24@27c; Longhorns, 28@28½c; single Daisies, 28@29c; jobbing sales of fancy goods, 29@30c.

PHILADELPHIA HAY AND GRAIN

—July 3, 1920.

Baled Hay and Straw.—Receipts, 108 tons of hay. The market was firm under scarcity. Demand was moderate. We quote: Timothy, hay, No. 1, none here; No. 2, $42@44; No. 3, $39@40; sample, $33@37; no grade, $28@32; clover-mixed hay, light mixed, $42@43; No. 1 mixed, $40@41; straw, No. 1 straight rye, $17@17.50; No. 2 do., $16.50; No. 1 wheat straw, $14.50@15; No. 2 do., $13.50@14; No. 1 oat straw, $14.50@15; No. 2, $13.50@14.

Bran.—Quiet but steady. We quote: Car lots, including sacks soft winter bran, western, in 100-lb. sacks, per ton, $60.50@61; spring bran, in 100-lb. sacks, per ton, $59@60.

Corn.—No. 2 Yellow, $1.98@2.02.

Wheat.—No. 1 red winter, $2.93@2.98; No. 2, ditto, $2.90@2.95; No. 3, do., $2.87@2.92; No. 4, do., $2.83@2.88; No. 5, do., $2.79@2.84.

Oats.—No. 1 White, $1.32@1.33; No. 2, do., $1.31@1.32; No. 3, do., $1.30@1.31; No. 4, do., $1.28@1.29.

PITTSBURGH HAY AND GRAIN

—July 3, 1920.

While the receipts of hay to this market are only moderately heavy for this time of the year, nevertheless, they are sufficient to meet the demand which is somewhat lax. Sales are now being forced. From all reports there is a considerable quantity of hay in transit but on account of the Railroad conditions, they are only bringing cars in gradually which has kept the market steady up to the present writing. Any continuous increase in receipts would no doubt cause weaker conditions. As it is, market is gradually working lower, particularly on the poorer grades. The supply of straw is about equal to the demand. In fact, the conditions surrounding the hay market, are fully applicable to the straw. Ear Corn dull and hard to sell Oats steady

No. 1 Timothy, $42@43; Standard Timothy, $40@41; No. 2 Timothy, $37@38; No. 3 Timothy, $34@36; No. 1 Light Clover Mixed, $37@38; No. 1 Oat Straw, $17.50@18; No. 2 Oat Straw, $17@17.50; No. 1 Wheat Straw, $17@17.50; No. 2 Wheat Straw, $16.50@17; No. 1 Rye Straw, $17.50@18; No. 2 Rye Straw, $17@17.50.

THE MILK MARKET

—July 3, 1920.

Demand active last week and surplus much reduced. Export demand still very light. July rate in 200-mile zone is $2.95 per 100 lbs. for 3 percent milk; add 4 cents per 100 lbs. for each one-tenth of one percent extra butterfat. Grade A bottled milk is retailing at 9c per qt.; grade B 16c and grade B loose milk at 11@12c.

Receipts of milk and cream in 40-quart cans for the week ending July 3, 1920, were as follows:

Railroad	Milk	Cream
Erie	38,786	4,922
Susquehanna	7,983	167
West Shore	13,611	2,612
Lackawanna	54,113	2,499
N. Y. Central (long haul)	185,524	6,372
Ontario	42,201	1,964
Lehigh Valley	66,683	2,731
New Haven	6,675	80
Pennsylvania	1,186	556
Other Sources	5,500	250
Totals	432,262	22,153
Same week last year	403,213	19,729

INTERSTATE MILK PRICES

—July 3, 1920.

The basic price for 3 percent milk within 10 miles of Philadelphia is $3.28 per 100 pounds and one cent per hundred less for each 10 miles distant. Four cents per 100 pounds is paid for each one-tenth of one percent fat above 3 percent. These are prices for the basic quantity or less. The price for amount exceeding of basic quantity is on the basis of 6.6c for 3 percent milk.

TOLEDO CLOVERSEED

—July 3, 1920.

Cloverseed.—Prime, cash, $25; October, $25.25; December, $24.25.

Alsike.—Prime, cash, $25.15; October, $25.50; December, $25.

Timothy.—Prime, cash, 1917; $5.40; 1918, $5.40; 1919, $5.55; September, $5.75; October, $5.35; December, $5.60; March, $5.85.

TOBACCO MARKET

—July 3, 1920.

The week was characterized by an exceedingly favorable turn in trend of the Pennsylvania tobacco market situation. Recent heavy purchases from dealers have so depleted the supply that it is said a real dearth is developing. It is stated that demand was never so urgent as at present and that the tobacco of the locality will be practically out of the market in a few weeks. Analyzing the situation it is noted that the average, annual product of the state is 55,000,000 pounds and that at present not to exceed 2,500,000 pounds remains in the hands of dealers. Accordingly, advanced prices are predicted for the 1920 product which it is claimed dealers are attempting to contract at prices considerably in excess of the highest paid for last year's crop. Growers have been advised to not sell at under $30 per cwt., and probably still better advised to not contract at all under present long-range and more or less uncertain conditions. Supporting the belief in valuations it is known that new Florida tobacco, which has been harvested, is selling at $120 to $130 per cwt. as compared with $75 to $95 at the corresponding time last year and that the Cuban crops is being taken at 65 percent advance over last year.

The weather as well as the market was favorable during the week, having been described as "made to order." Transplanting has been completed and growers were cultivating the seedlings which should develop rapidly under the present influence of favorable showers and with a few exceptions unusual freedom from hindering insects. It is at this time that danger from hail looms upon the vista and to cover this many growers are investing a few dollars per acre in hail insurance. It is probably better to be thus safe than to be sorry in the event of loss.

DROUGHT AFFECTS WHEAT CROP OF NEW SOUTH WALES

The wheat crop has been disastrously affected by the drought which has existed in all parts of New South Wales. It is estimated that the yield of the present season will be only 4,296,000 bushels, the smallest amount during the past 20 years. There is, in fact, an insufficient amount of wheat even for domestic consumption in Australia.

TRADE BALANCE IN MARCH

The imports into this country during March reached a total of $484,000,000 and the trade balance in our favor was increased $336,000,000. The exports during the month were $820,000,000.

MANUFACTURES EXPORTED

The total value of finished manufactures exported in the eight months ending with August, 1919, is $1,690,000,000 against $1,361,000,000 in the corresponding months of 1918 and $422,000,000 in the same months of 1914, the total for the eight months of the current year being thus four times as much as in the same months preceding the war.

PLANTING ALFALFA

I would like some advice along the line of planting and raising alfalfa. It is my intention to seed two acres this fall. My ground is of a gravel and sandy nature and lays to the south, slightly rolling, dry and entirely free from winter springs, and fairly deep.

It is now in clover and I intend to run the manure spreader over it with a good coat of manure, and then plow it, add lime, and work it down to a good solid seed-bed.

Will you kindly tell me if my ground is all right, my method of working and preparing it and how much lime should be added. Also, what is the best amount of seed, time of seeding, and best method of inoculation. H. G. L., Union Co., Pa.

The land you have should be very satisfactory for alfalfa and there are no suggestions to make regarding your method of preparation except that the clover sod should be thoroly mixed with the soil by harrowing with a disk harrow both before and after plowing, and a liberal quantity of acid phosphate, no less than 300 pounds to the acre, should be applied prior to planting for the reason that alfalfa does not do well after legumes which take nitrogen from the air unless phosphoric acid is present in the soil.

If your present clover crop grew well, meaning that it produced a good crop of clover uniformly over the entire field it is probable that one ton of ground limestone would be sufficient but I would use no less than two tons in order to be doubly sure. In case burned lime is available rather than ground limestone one ton of it should be sufficient and in this case it is very likely that it would give better results because it would act more quickly and start the decomposition of the clover sod so that it would liberate the food it contains for the plants this fall. If it is used the land should not be seeded for a week or ten days after it is applied and mixed with the soil.

Generally speaking about 20 pounds of seed should be sown during the third week in August in your locality and not later than the 25th. It is very important that good seed be secured. Western grown seed of high germinating quality is most desirable.

The most satisfactory method of inoculation is to spread 300 to 500 pounds of soil from an alfalfa field over the field you are planning to plant. It may be spread by a shovel from the back of a wagon or screened and put on with a grain drill. This operation, however, should be done either on a cloudy day or on evenings when the sun has partly disappeared. If there are no alfalfa fields near you there are a number of commercial cultures which may be secured at very reasonable prices. It is impossible to give you directions for their use because each company prepares a slightly different culture and the method varies in each case but each package has with it a pamphlet giving directions which should be followed to the letter.

Buys From Small Farmers and Retails as High as Five Loads a day to Consumers

AMERICA IS BUILDING GOOD ROADS

The remarkable rate at which the number of Federal-aid road-building projects has increased since the war is shown in a summary relating to all such work from September 30th, 1916, to April 30, 1920. On the latter date the States had filed with the bureau 2,885 project statements, of which 2,790 had been approved, representing 27,796 miles of highway. The totals on April 30, 1919, were little more than one-third these amounts. Up to May 1 of this year 1,974 projects had proceeded to the stage at which plans, specifications, and estimates had been delivered to the Bureau of Public Roads. The plans, specifications, and estimates of 1,827 of these had been recommended for approval, representing 13,845 miles. Project agreements had actually been executed and construction work was in progress on 1,569 projects, totaling 11,987 miles. In addition, work had been begun on about 100 projects for which agreements had not actually been signed, thus expediting the progress of the work and bringing the total mileage under construction up to 13,540. The summary shows that a great reduction has been made in the time required for preliminary work before actual construction is begun.

On the average the states have submitted project statements for nearly 95 percent of their respective allotments and have entered into agreement to construct highways which call for about one-half of their Federal-aid money. The projects actually completed and paid for are comparatively few, but they are materially exceeded in number by those which are practically completed. California, Delaware, Illinois, Idaho, Indiana, Iowa, Kansas, Louisiana, Maine, Maryland, Minnesota, Nebraska, New Hampshire, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, Utah, Washington, West Virginia, and Wyoming have each submitted approved project statements for all or nearly all of their allotments.

MOTOR VEHICLES IN U. S.

The total number of motor driven vehicles in the United States and the comparative number of passenger cars and motor trucks is approximately 7,000,000 of which 650,000 are used for commercial purposes—passenger cars out-numbering motor trucks by more than ten to one. About 375,000 trucks are equipped with pneumatic tires, showing the tremendous strides made by the pneumatic in the few years since its development. That 275,000 trucks are running on solid tires indicates that this and the cushion type will always have a certain field where superior traction and cushioning powers are not necessary.

SUMMARY OF ANIMALS SOLD ON LANCASTER MARKET

	May, 1920	May, 1919
Cattle	5,932	7,433
Hogs	690	2,607
Sheep	47	33
Calves	915	108
Horses	85	241

NEW YORK LOSSES TOAN

Lewis A. Toan, Assistant State Director of Farm Bureaus for New York has resigned to enter the commercial seed business. Mr. Toan was manager of the Monroe County Farm Bureau for five years starting with the organization of the Bureau in 1913. For the past two and a half years he has assisted in the organization and has had supervision of the Western New York counties in the central office of farm bureaus. He has acted as secretary of the Transportation and Marketing Committee of the State Farm Bureau Federation during the past year.

CHRISTIE IS NAMED DIRECTOR

Prof. George I. Christie, for the last fourteen years head of the agricultural extension department of Purdue University, has been named director of the Purdue Experiment Station to succeed Prof. C. G. Woodbury, who leaves July 1 to become head of the food research bureau of the National Canners' Association with headquarters at Washington, D. C. This change gives Prof. Christie charge of both experimental and extension work in Indiana and will mean closer co-operation in these two important lines of agricultural development.

HIS SINKING SPELL

Old Father Hubbard
Went to the cupboard
To get his poor self a drink.
But when he got there
The cupboard was bare,
So he got him a drink at the sink.

—Brooklyn Eagle.

PLANTS
CABBAGE, TOMATO, PEPPER AND CELERY
ALL LEADING VARIETIES

Cabbage Plants	$1.00 per 1000
Tomato Plants	$1.50 per 1000
Pepper Plants	$4.00 per 1000
Celery Plants	$3.00 per 1000

All Plants Packed Carefully in Moss
OROL LEDDEN, Sewell, N. J.
Bell Phone, Wenonah 91-2
Largest Grower of Vegetables Plants in N. J.

REG. SHORTHORNS FOR SALE. Cows with calves; heifers, bred and open; also some choice young bulls Farmers' prices. R. H. LYLE. CADIZ, OHIO.

For Every Farmer
The Champion
All Purpose Scoop

Shrewd, sensible farmers have used Champion Wire Scoops for over 40 years, because they are lighter, stronger and more practical and because they are durable.

Built from a strong steel wire, double tinned, rust proof, Champion Wire Scoops last a lifetime. *Champion Wire Scoops are indispensable on your farm for handling corn, potatoes, apples, etc. Staple edge—can't cut—no dirt.*

Ask your dealer or order direct.

MICHIGAN WIRE GOODS CO.
501 Second St., Niles, Mich.

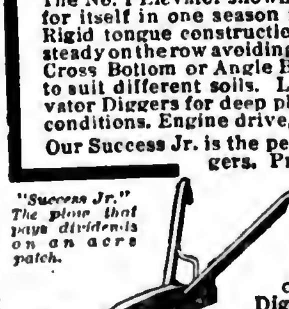
DIG YOUR POTATOES THE FARQUHAR WAY

A Farquhar Digger will get you more marketable potatoes, and besides save much labor. These machines are sufficiently strong to stand the strain of hard continuous usage. They dig clean, and leave the potatoes convenient for picking.

No. 1 Elevator means larger profits for growers.

The No. 1 Elevator shown above has paid for itself in one season for some users. Rigid tongue construction holds Digger steady on the row avoiding cutting. Either Cross Bottom or Angle Bucket Elevator to suit different soils. Larger size Elevator Diggers for deep planting and bad conditions. Engine drive, if desired.

Our Success Jr. is the peer of Plow Diggers. Price so low within reach of the smallest grower. The Gilt Edge for those who desire a more elaborate Walking Digger.


"Success Jr." The plow that pays dividends on an acre patch.

Large illustrated Digger Catalog free on request. Every grower owes it to himself to send for this booklet.

A. B. FARQUHAR CO., Ltd., Box248 York, Pa.
Also Engines and Boilers, Tractors, Sawmills, Threshers, Cider Presses, Grain Drills. Ask for literature.

R. K. TIRES
Never Disappoint

A rebuilt, double-tread, chain stitched tire that has twice as much fabric as an ordinary tire—and asks for twice as much work. Behind them stands, not only a long record of hard work well done, but the guarantee of this company!

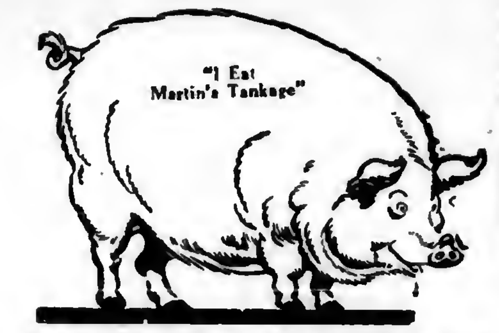
The following are the little prices of our guaranteed tires

Size	Non-Skid	Price	Size	Non-Skid	Price
30x3		$ 7.00	34x4		$11.50
30x3	1-2	8.50	34x4	1-2	13.50
32x3	1-2	9.00	35x4	1-2	14.00
33x4		11.50	36x4	1-2	14.30

5 percent off for cash with order.
10 percent deposit required with all C. O. D. orders.

R. K. Tire Company
837 No. Broad St., Dept. A, Phila., Pa.
Send for descriptive booklet and price list.
Good Territory Open for Live Agents.

Thoroughbred Reg. Percheron Stallion for sale, 12 years old; color seal brown. Guaranteed sound in every respect, fearless, and works single and double. A sure foal getter. Will sell at a reasonable price. Fee for living colt $20.00. Address F. P. MILLER. SPRINGTOWN, PA.



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It takes just as much time to feed good, wholesome tankage as it does the poor kind. And it costs *less* in the end. You can always depend on Martin's Tankage. Only the best of meat scraps, carefully sterilized, are used. Sold with a guarantee. Write for feeding directions and prices.

D. B. MARTIN CO.
36th and Grays Ferry Ave., PHILA.

Palmyra Quarry FARMS OFFER Fine Big Type Reg. Berkshire Hogs for sale. Outstanding Pigs, either sex, with stretch, up on toes, smooth, and splendid heads, out of exceptional big sows; Rivals Champion, Lord Premier Successor and Superbus breeding. Also bred Gilts, bred to our outstanding herd boar, Highwood Rival 431st. Pay when you see the stock. Satisfaction guaranteed. Galen G. Grubb, Palmyra, Pa.

PATHFINDER'S RIPPER
By PATHFINDER
dam by Great Sensation, heads our Duroc herd. Line bred Pathfinder offering of 40 head at Public Auction Dec. 2nd. Get a catalog.
SLATY RIDGE FARM, Palmyra, Pa. Box 5.

Registered Durocs Best blood lines. Sold out at present. Will book orders for spring pigs. Northumberland County Duroc-Jersey Breeders' Association, J. M. FRY, Corresponding Secretary, Sunbury, Pa.

Berkshire Pigs, sired by States Majestic, one of the best boars ever bred by Penna. State College. Also two extra good boars ready for service. A. B. Kirsch, Nicktown, Pa.

SELECTED GRADE PIGS
6 weeks old, mostly O. I. C. and Chester Whites, price $6. THE OAKS DAIRY FARM, Wyalusing, Pa.

TARRYMOOR BERKSHIRES
Quality Growthiness Prolificacy
We guarantee satisfaction.
Robt. E. Atkinson, Wrightstown, Pa. Bell Phone.

REG. DUROCS Large size, heavy bone, best blood lines, prices reasonable. Satisfaction guaranteed.
JOHN W. COX & SON. New Wilmington, Pa.

POLAND CHINAS 15 well bred Poland China pigs for sale, 7 weeks old, $6 each.
GEO. W. MILLER, STEWARTSTOWN, PA.

Reg. Chester Whites. Stock guaranteed as represented or money refunded. Fine thrifty well bred stock, reasonably priced. L. D. GARRIGUES, Thornton, Pa.

Registered Berkshires Spring Pigs $15.00 each. Bred sows $50 to $75. L. C. TOMKINS, Ellenton, Lyc. Co., Pa.

Reg. O. I. C.'s Booking orders for Spring pigs. Silver strain breeding.
BRUBAKER BROS., Star R., Cocolamus, Pa.

Chester Whites Boars and Sow Pigs. Bred Sows. Collie dogs.
ARCADIA FARM, BOX D, BALLY, PA.

REG. DUROCS Choice Pigs, Orion and Col. Blood lines. Satisfaction guaranteed. Price reasonable.
ALLEN L. METZLER, SOMERSET, PA. R 4.

Hampshire Hogs, bred sows, and 8 and 10 weeks old pigs.
A. H. FUNSTON, WILLOW HILL, PA.

REG. O. I. C'S. all ages. Open and bred gilts at prices to move them.
Black Diamond Minerea Farm, Mt. Bethel, Pa.

CHESTER WHITE PIGS.—A fine lot now ready to ship, either singly or in pairs.
R. L. MUNCE, Canonsburg, Pa.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, Center Valley, Pa.

O. I. C. March Pigs. Reg. free. Big prolific strain: sired by Frank No. 74413, Vol. 21. Prices right, sat. guaranteed. Edw. N. Lydick, Indiana, Pa., R. 25.

Large Type Duroc. Boars and Fall Gilts. Also some fine Spring pigs. Guaranteed to please or money refunded. B. H. SAGER, BASIL, OHIO

DUROCS. Sept. boars ready for service. Also 2 Spring boars. Sept. Gilts bred for Sept. Spring pigs not skin. All im. I. D. Jackson, R 10, Van Wert, Ohio

Miscellaneous

REG. BIG TYPE POLAND CHINA PIGS. Hampshire Down Sheep, all from the best blood and priced right. C. E. SECHLER, MARKLETON, PA.

Reg. Big Type SPOTTED POLAND-CHINA Pigs, bred from a son of O. K.'s Pride No. 88, also 5 Reg. Holstein Bulls. H. C. Kymer, R.4, Shippensburg, Pa.

Chester Whites and HAMPSHIRE SHEEP Write your wants. We can please you. TWIN BROOK FARM, Newville, Pa.

COLLIES Perfectly mated sable and white puppies. Champion and imported stock. Farm raised.
MRS. HUGH BRINTON, WEST CHESTER, PA.

PLEASE say: "I saw your adv. in Pennsylvania Farmer."

The Wool Situation

The wool growers of the United States are not willing to remain meekly at home and see their industry go to ruin, if means of rescue are obtainable. The present condition of the wool market has alarmed not only the wool growers, but bankers, manufacturers and business interests depending for an existance upon the woolen industry. Representatives of the American Farm Bureau Federation and several wool producers' associations, individual wool growers, bankers and dealers, to the number of more than sixty, and in addition Senators King and Smooth of Utah, and Kellogg of Minnesota, and Representative Mondell of Wyoming, appeared before the Federal Reserve Board, June 21st, to secure immediate relief for the wool producing industry.

In his statement for the producer, Professor Coffey, vice president of the National Wool Growers' Association, said that since May 20th there has practically been no wool market in the United States. On that date wool dropped from 65 cents per pound down to 20 cents, with no takers. This cessation in buying, caused by disturbance in the manufacturing trade, cancellation of orders for manufactured goods, and the shutting down of credits, has created a situation most serious in the range states. The year 1919-1920 was a very disastrous one in several Western states, resulting from a severe drouth, long, cold winter and high priced feeds. The result of these conditions has shown itself in a spring lamb crop that amounts to less than 60 percent of normal for the range states.

The need for early returns from the wool clip, it was pointed out, existed in a serious way in all wool growing sections. Figures were presented showing that there are in the range states 127,500,000 pounds of wool not sold or advanced upon, and in addition to these amounts, there is a total of 68,500,000 pounds in Maine, New York, Pennsylvania, West Virginia, Kentucky, Ohio, Michigan, Indiana, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska and Illinois. The loans necessary to be placed on this unfinanced wool in the opinion of the committee, will amount to $50,000,000.

In presenting their case the growers showed that conditions in the East were similar to those in the West, due to a hard winter and high feed costs. Regardless of these high production costs, the wool market in the past two years has been declining, while woolen products have been constantly appreciating in value. It was further shown that at the present moment, while dealers and manufacturers are talking in terms of reduced prices, retailers and jobbers say that no reduction in the price of finished products is being made to them and in certain sections prediction is made that those holding discount sales will be obliged to replenish their stocks at prices higher than were paid for the goods sold.

Discussing the relation of the finished product to the price of raw wool, it was demonstrated that the price the grower received for his wool had no effect on the price the consumer paid for his finished product, the initial cost for material entering into a suit of clothes being so small that in a hundred dollar suit the difference between a price of twenty cents a pound and a price of 70 cents a pound, to the grower, would not amount to more than $2 on an entire suit. In 1919 woolen cloth manufactured from wools produced in 1918 and costing 20 cents more than, they did in 1919, were sold on the market at a cost of over $1 less per yard than the same grade, made out of the cheaper wool stocks and sold the subsequent year. In 1910 the price that the grower received was within six cents per pound of the price the dealer received and this level was practically constant up until May of 1919, yet in May, 1920, when the price to the grower was averaging 63 cents, the price the dealers received ranged from 70 cents to 97 cents, showing that if there is an abnormal advance in wools at the present time, those who have benefitted by it have not been the producers but the dealers.

Statistics were also given showing that wool stocks of the world are not excessive. Manufacturers' lofts carry no excess stocks of wool and stocks of manufactured goods are low, and mills must purchase wools before starting to fill trade orders.

It was not the intention of the conference to attempt any arrangement to maintain artificial prices, but simply to secure the means by which the present interruption of the wool market would be removed and normal conditions restored. The plan of action adopted is considered more satisfactory than the cotton loan plan of 1914 which had been suggested. At the termination of a conference between the Board and a sub-committee consisting of bankers familiar with the situation, the Board authorized the following statement:

"A wool grower may ship his wool to one of the usual points of distribution, obtaining from the railroad a bill of lading for the shipment; the grower may then draw a draft against his bank, for such an amount as may be agreed upon by the grower and the bank, secured by the bill of lading."—E. E. Reynolds.

DR. JOHN R. MOHLER AND HIS MEN

(Continued from Page 3)

interested in live stock.

Mohler is a very successful administrator. He is just one of the 4,400 workers—a little busier, perhaps, but just as accessible as any of them. His success is due to the fact that he combines the qualities of the researcher, the practitioner, and the administrator. And he has been able to do that, I believe, because he never had a fad. I tried diligently among the men who know him best to get them to tell me something outside of his regular duties that he works at or plays at. They couldn't do it. The nearest any of them came to it was one who said, "Well, Mohler loves a good joke—loves to hear one and loves to tell one."

Leghorn Chicks 15c Apiece

in 100 lots, prepaid — Hillpot quality, too. Don't complain of the high cost of eggs next Winter if you overlook this opportunity to get

HILLPOT QUALITY CHICKS

AT THESE LOW PRICES WITH POSTAGE PREPAID TO YOUR DOOR

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White Leghorns	$4.00	$7.50	$15.00
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R. I. Reds	5.25	10.25	20.00
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BIG STURDY BABY CHICKS
June 7th, 14th, 21, 28th
Martin's White Wyandottes $25.98 per 100, Ringlet or Parks Barred Rocks, Famous Anconas, Quality S. C. Reds $22.00 per 100. Eglantine S. C. White Leghorns $18.00 per 100. 25 and 50 lots, same price per chick. Order from this add.
SUNNYSIDE POULTRY FARM,
Copper Hill, N. J.

ORDER LEADER'S CHICKS NOW.
White Leghorns, $16 per 100. Barred Rocks, $18 per 100. Safe delivery and full count by parcel post prepaid guaranteed. These chicks are bred from hens with profit paying qualities including quick maturity fixed in them by years of breeding for that purpose. Ready for shipment May 25, June 2, June 14. Cash with order. No order accepted for less than 100.
LEADER'S POULTRY FARM, R2, York, Pa.

Hummer's Famous Chicks. Large, healthy and strong. Bar. Rock per 100, $18; 50, $9.50; R. I. Reds 100, $19.50; 50, $10; S. C. B. Leghorns 100, $17; 50, $9; S. C. White Leghorns 100, $13.50; 500, $65; Anconas 100, $31; 50, $16. Prompt delivery each week, prepaid, live arrival.
E. R. HUMMER & CO., Frenchtown, N. J.

200,000 CHICKS
Reds, Rocks, Leghorns, Minorcas and Broilers at rock bottom prices by Parcel Post. Prepaid and safe delivery guaranteed. Our 11th year. Catalog free.
KEYSTONE HATCHERY, Richfield, Pa.

COCKERELS: Barron 300 Egg Strain S. C. White Leghorn 16 wks. old husky purebred cockerels. Sired by prepotent males, out of extra high producing hens. A fine chance to improve your flock at small cost. Carefully crated, $5 each, express prepaid.
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Look! BABY CHICKS $14 a 100 up!
By insured parcel post, postage paid. 40 breeds chicks, 4 breeds ducks. Get June and July chicks for January layers. Catalog free, stamps appreciated.
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Farm range, prize winning Buttercups. Investigate this wonderful variety. Write for circular.
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CHIX Wyandottes, Reds, Rocks & Leghorns. Pekin, Rouen and Runner Ducklings. **DUX**
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Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
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CHICKS ARE ALL ENGAGED for this Season. THANK YOU.
THE CYCLONE HATCHERY, Millerstown, Pa.

That Lay and Pay Beautiful Buff Rocks. Vigorous and prolific. Eggs, $1.50 for 15, balance of season.
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S. C. WHITE LEGHORN 2-year hens, also fine early hatch cockerels. Will sell at low prices.
C. P. SHIREY, STEWARTSTOWN, PA.

WANTED 2 Boxes White Leghorn Eggs, fresh laid, weekly. Best references. J. MUELLER, Harrison Place 627, West New York, N. J.

PULLETS, BARRENS, 16 weeks and laying pullets, $1.50 and $2.00 each. Breeders, $1.75; Roosters, $1.
G. ROUTZAHN, ASPERS, PA.

June 29, 1920.
Pennsylvania Farmer has been my best puller this season again, at times I have been overloaded with orders.
C. P. Shirey, Stewartstown, Pa

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Here is just one instance of the re-its obtained by the Iowa Agricul-ral Experiment Station in tests vering ten years. A scrub cow had a record of 4,588.4 lbs. milk and 201.67 lbs. fat at 6 years of age. Her daughter by a purebred Holstein bull produced as a 4-year-old, 6,822.8 lbs. of milk and 283.75 lbs. of fat, an increase of 49 percent in milk and 41 percent in fat over the dam's best record.

That evidence, easily verified, should be pondered over well by farmers and dairymen who are desirous of more profit per cow, but who are putting off buying a Purebred Holstein Sire. Send for our extremely interesting booklets today. It means money to you.

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POLLED HOLSTEINS
registered in the Herd Books of the Holstein Friesian Association of America. Herd sire out of world's record senior four-year-old,
KEYSTONE BEAUTY PLUM JOHANNA
No. 161646
At 4-10-20, 365 days—25787.8 milk; (4.02%) 1294.7 butter
At 3-3-23, 365 days—22496.8 milk; (3.94%) 1108.6 butter
2 years under full age—48284.1 milk; 2403.6 butter. The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year.
Bull calves $100.00 and up. GEORGE E. STEVENSON & SONS, Clarks Summit, Pa.

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20 YEARS SALE
HEAVES, COUGHS, COLDS, DISTEMPER, INDIGESTION
Cures Heaves by correcting the cause—Indigestion. Prevents Colic, Staggers, etc. Best Conditioner and Worm Expeller. Three large cans guaranteed to cure Heaves or money refunded. $.65 and $1.30 per can (Includes War Tax). At dealers' or mail. Largest packages. Dose is small. Cheapest to use.
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MINERAL HEAVE COMPOUND In USA over 50 years
CURES HEAVES
Booklet Free
$3.25 Box guaranteed to give satisfaction or money back. $1.10 Box Sufficient for ordinary cases. (Includes War Tax.)
MINERAL HEAVE REMEDY CO., 408 Fourth Ave., Pittsburgh Pa.

Farms for Sale

A RARE OPPORTUNITY
Settlement of an estate requires immediate sale of 2 farms carrying investment of $25,000.00. 2½ miles from Liverpool, Perry County, Penna.; 32 miles north of Harrisburg; and 20 miles east of Sunbury, on State Highway; 2½ miles from railroad. Churches, schools, electric light, telephone, rural delivery. Both farms devoted to general farming, splendid opportunity for specializing in fruit, dairying and trucking. Farm No. 1 contains 228 acres, of which 112 acres are an island, level as a floor, in Susquehanna River. Buildings on shore. Can be bought for $8500.00—10% cash. Farm No. 2 has 120 acres, 40 of which are a virgin forest track with timber enough to pay for farm and build a new house. Price $7000.00—10% cash. Either or both farms the chance of a life-time. If interested, write for full particulars to S. H. Hart, 112 N. Beaver St., York, Pa.

For Sale— Immediate possession, 92 acre fruit and truck farm located 1 mile from Burlington City market, 10 acres tomatoes, 6 acres sugar corn, 2 acres cucumber, 1 acre lima beans, 40,000 cabbage plants, 2,000 egg plants, 7 acres new hay, apples, peaches, pears, strawberries. Price $12,000. Terms. C. J. Lame, Farm Agy., Inc., Burlington, N.J.

Farms For Sale The best, with all improvements, on good roads, from $75 to $125 per acre. 301 Western Reserve Bank Bldg., McBRIDE & McELRATH, Trumbull Co., Warren, O.

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Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Sore Feet.—Have two cows that are in good condition, but both are troubled with sore feet. The sore feet of one, hind feet of the other are sore. What shall I apply? E. M., Breezwood, Pa.—The feet should be kept clean. Apply one part Liquor Cresolus Compositus (U. S. P.) and fifteen or twenty parts water 3 times a day. Another very good application is equal parts oxide of zinc and boric acid. This power should be applied 2 or 3 times a day.

Acute Indigestion. — Colic —During the past week my 6-year-old horse has had two different sick spells. He suffers considerable pain. He paws, and rolls, and a rumbling sound or noise can be heard; besides, he bloats some. These are the only attacks he has had. J. P., Alport, Pa.—Doubtless, a change of feed will prevent another attack. Water him before feeding grain. Keep his bowels open and exercise him daily. When sick give him 2 or 3 ounces of hyposulphite of soda in one quart of water as a drench every hour until pain ceases. Give him ½ teaspoonful ginger and a tablespoonful of baking soda at a dose in feed 2 or 3 times a day. Feed more oats and less corn.

Curb.—We have a 3-year-old colt that has a bunch on back part of hock joint causing some lameness. Up to 3 weeks ago he seemed to be all right. He is used exclusively for farm work, but I dislike to work a lame horse. H. B., Wheatland, Pa.—Doubtless he sprained a short ligament, situated at back part of hock joint. A bunch of this kind and location is called curb. It is good practice to give rest, clip off hair and apply one part cantherides and five parts lard, every ten days until he is sound. After lameness is gone, paint swelling with tincture of iodine every day or two. Don't drive faster than a walk and avoid hauling heavy load.

Serious Abscess.—Have a two-year-old colt that was kicked on hip by one of the other colts. Was not wounded, but a large flabby bunch soon came. It seems to have fluid in it. What treatment do you recommend? M. K. L., West Hickory, Pa.—If the bunch it hot, it may contain blood; if cold, it contains serum, the watery part of the blood. If cool, don't hesitate to open sack freely in order that every drop of fluid will drain out. Swab inner wall of sack with tincture of iodine 3 times a week.

Sore Teats.—One of our cows is troubled with sore teats, would like to know of a remedy that will heal them? L. M., Wyncote, Pa.—After she is milked apply one part oxide of zinc and four parts petrolatum.

Lymphangitis.—Last January my horse had an attack of lymphangitis, caused by poor circulation of blood. Hock and hind leg thick. E. F. D., New Bethlehem, Pa.—Give him one dram potassium iodide daily; also give a teaspoonful acetate of potash in drinking water once a day. Do not feed him much grain when he is not working. Daily exercise is one of the best preventive remedies. Keep the bowels open.

Bots.—Worms.—Have brood mare that is thin; we suspect her of having bots and worms. F. H. W., Salem, N. J.—Give mare a teaspoonful gentian at dose in ground feed once a day. Grass is the best feed for her.

Feed Poison —Have a seven-year-old mare seemingly in good health, but when allowed to run on grass her lips and nose swell. G. C., Tippecanoe, O.—Do not allow her to eat the grass when wet. The nose of a white colored horse when smeared over with vaseline or a heavy non-irritating oil is not likely to be affected by grazing on such pasture.

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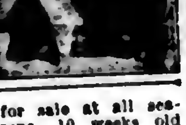

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O. I. C. Pigs, either sex. We ship on approval and register free.
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All ages. Strong and vigorous stock. When you buy you want the best, don't you? Then write us. Inspection invited. ROSS B. WITMER, LAMPETER, PA. Member Lanc. Hampshire Breeders' Co-operative

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Everything sold. Booking orders for gilts bred for fall farrow, and pigs for Pig Club work only.
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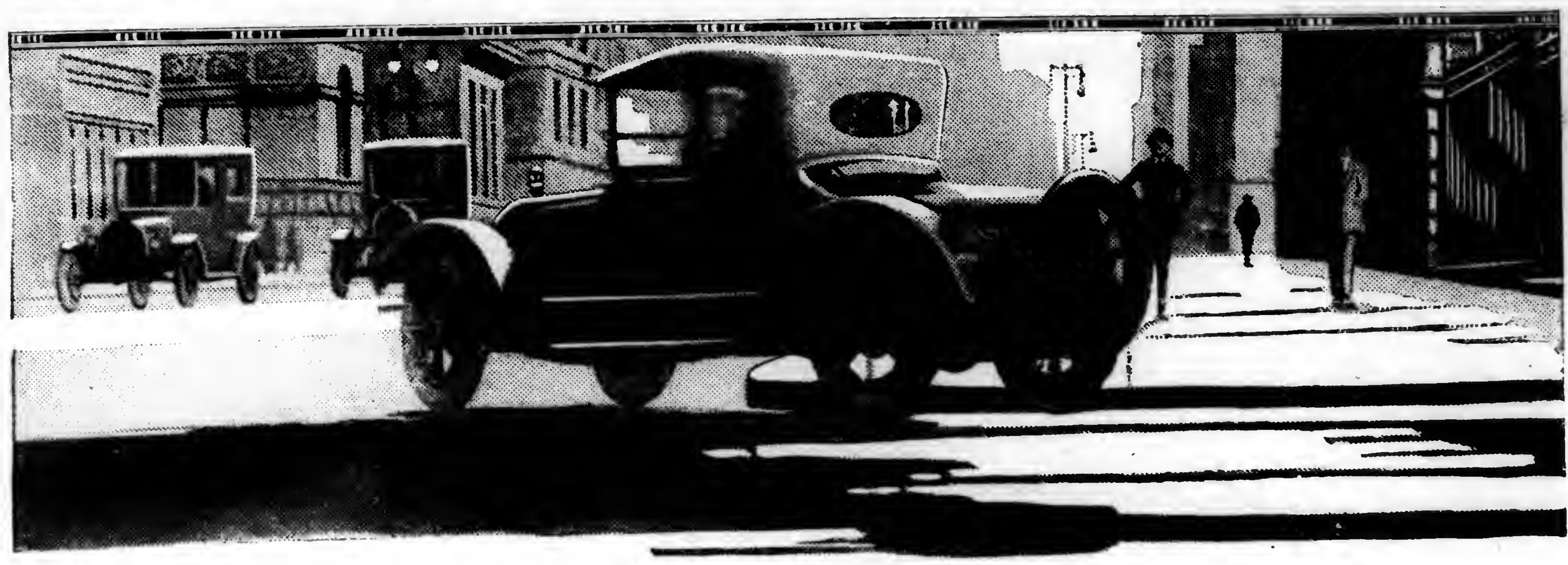
How much More Tire Economy



The driver of the car in the foreground probably does not realize that by rounding the corner too quickly he may be taking as much as a thousand miles out of his rear tires.
A great deal of tire trouble can be avoided by slowing down to a reasonable speed in negotiating corners.

IT IS interesting to watch a car owner gradually becoming conscious of his tires. If his first tires don't give him what he has been led to expect, you will see him going back to the dealer for an allowance.

Finally he reaches the point where he prefers to shoulder his losses himself rather than argue the matter out with the dealer.

Meet him a year later and you will probably find him with two or three different makes of tires on his car.

* * *

There is less conviction in the minds of motorists about tires today than about any other subject connected with motoring.

Despite all the claims, all the allowances, all the selling talks that are presented for the motorist's consideration, he goes along in his own way, seeking the tire that will give him the greatest economy.

Often you see him running foul of the irresponsible dealer.

But sooner or later he finds out that claims and allowances and selling talks can never take the place of performance.

* * *

More and more motorists are coming to realize that the only way to tire economy is through *better tires.* Avoiding the dealer whose idea of business is merely to fill the eye or to supply a market and going direct to the *merchant who deals in quality.*

Never has the United States Rubber Company's policy of *quality first* been more thoroughly justified or widely appreciated than it is today.

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Two hundred and thirty-five Branches

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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880
PUBLISHED WEEKLY

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PHILADELPHIA, PA., SATURDAY, JULY 17, 1920
75 Cents per Year

Suggestions on Harvesting Early Fruit

Fruit Profits Depend Upon Doing the Right Thing at the Right Time and in the Right Way

By Dr. J. P. Stewart

Northumberland Co., Pa.

The "Busy" signal is already being hung out by those fortunate enough again to have a crop of early apples or peaches for sale. Incidentally, we have also heard some extra big stories of the returns per acre that were in sight for some of these owners. It is not our present purpose to repeat these stories, but rather to make some suggestions that may aid in preventing the loss of prospective profits, thru some unnecessary or inadvisable action.

One of the commonest sources of loss is in not getting the fruit picked at the really best time. This is not always easily decided, altho many attempts have been made to describe it. In general we say that fruit is ready for picking when it has reached its proper size and color, and when it begins to separate relatively easily from the spur or bearing twig, but has not begun to soften nor to show the yellow ground colors that indicate full maturity, excepting possibly in occasional specimens. The color of the seeds has sometimes been used as an index of proper maturity, for picking, but it is relatively unreliable, as most varieties of apples develop brown seeds considerably before their maximum development has been attained. It is safe to assume, therefore, that any fruit in which the seeds have not turned brown, is not yet ready for picking.

Where one is in very convenient reach of the market, it is sometimes possible to let nature do the selecting and picking. This has been done successfully with certain early varieties of apples, especially on sandy or well-mulched soils, where the fruit was likely to be in the hands of the consumer within a day or two after the fruit had dropped. One of the ablest and most successful fruit growers in Jersey formerly followed this practice very extensively, but it has now been largely abandoned by his sons and successors,—probably as an indication of their greater progressiveness.

Such a method would of course be out of the question with such variety as the Yellow Transparent, as it bruises so easily as maturity is approached, and all bruises received after any considerable amount of yellow color is developed have the fault of turning black overnight. This variety also becomes mealy almost as soon as it becomes yellow, which greatly reduces its market value, altho it is still perfectly satisfactory for pies and sauce, which are the chief objective points for this variety anyway. It therefore requires careful handling and very close watching in the later stages of maturity, to prevent its becoming too ripe on the trees, and yet to permit it to attain its greatest possible size without becoming yellow.

The early peaches also require very close watching to avoid over-maturity with its attendant increase in rot. They should be picked as soon as they have developed sufficient size and color, but before any considerable amount of softening occurs, unless the market is very close. Most of these varieties should be picked over more than once, and this is especially true of the Greensboro and Carman. This is especially important where the general quality is high, and where sufficient time can be allowed for the unpicked fruit to attain its proper development. Otherwise, it may not be worth the additional cost as the labor expense is heavy. It is often worth while for a nearby market.

Judicious Thinning Would Have Paid Here

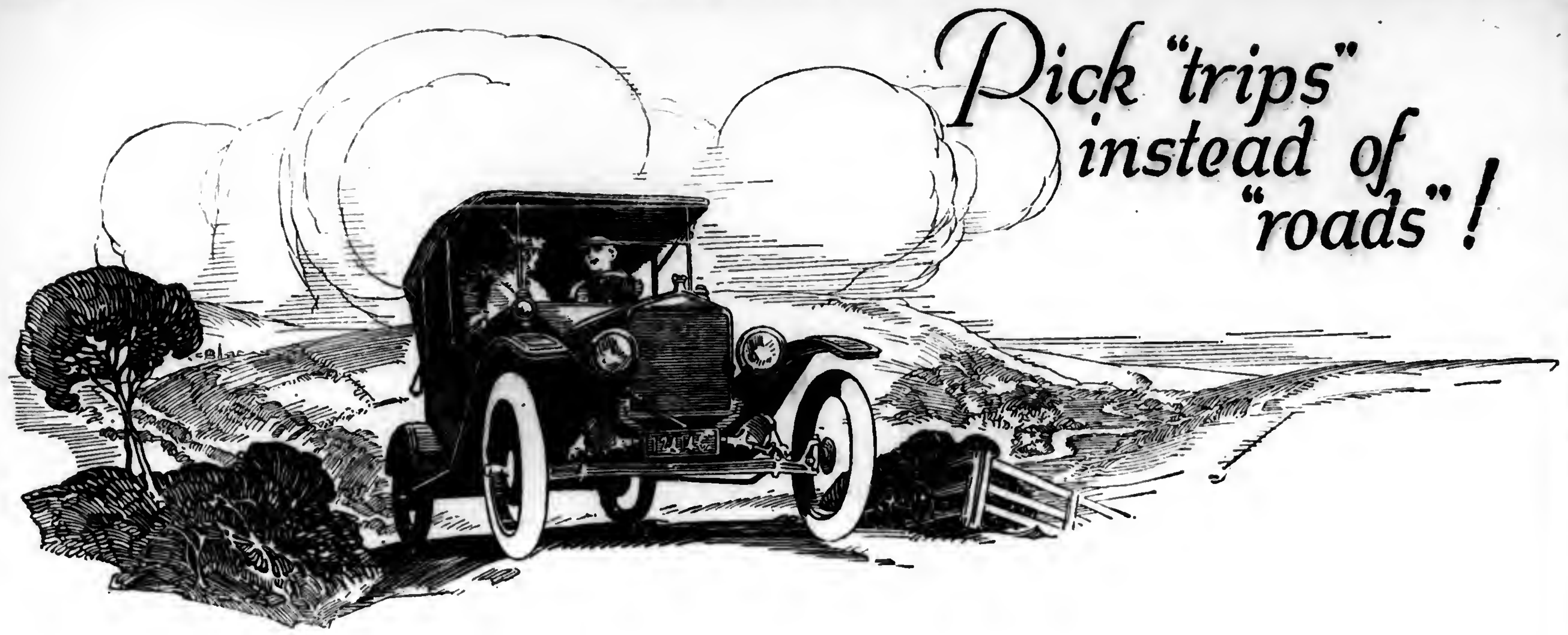
Picking Methods

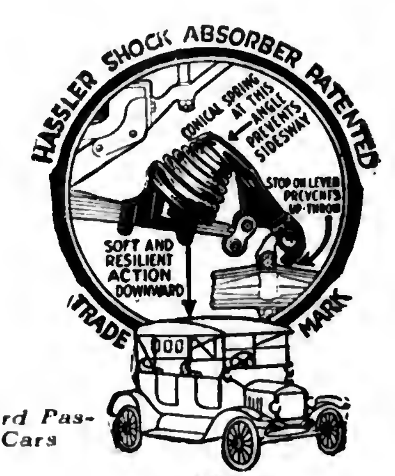
If the amount of fruit to be picked is large, the basis on which the pickers are employed is likely to be of considerable importance. It is probably true that the large majority of fruit growers still employ their pickers on a straight time basis, altho there is no doubt that payment on the basis of amount of fruit picked will usually greatly increase the speed of the work. The latter or piece-work basis is likely to be much more widely used this year on account of the general shortage in labor, and because of the fact that efficient pickers generally make better wages under this plan.

The chief objection to the piece-work plan is the possibility of carelessness of roughness in the handling of the fruit which may easily result in damage that will much more than equal the gain from the larger amount picked. This can be overcome by strict and continuous supervision. An important aid in this supervision is furnished by the plan of requiring each picker to place a card or tag bearing his number in each package of fruit that he picks. These tags are collected at the packing table, thus affording a record of both the quantity and quality of each picker's work, and on this basis further instructions can be sent out at any time to any one needing them. Fruit of low grade or of relatively high resistance to bruising is especially adapted to ths method of handling, but with proper supervision the piece-work method can be used satisfactorily in harvesting almost any grade of fruit crop.

Some instruction may also be needed in the actual picking of the fruit, especially in the case of apples, to see that both stems and spurs are left intact as far as possible. The pulling out of the stems is objectionable because it is likely to afford easier access to rots in storage, and the removal of twigs or spurs along with the fruit both injures the crops of succeeding years and increases the frequency of stem punctures in hauling and packing. The proper separation of stem from spur can usually be effected readily, either by giving the fruit a sharp upward twist and turn, or by means of a little pressure on the natural joint, with the tip of the thumb or finger, as the fruit is pulled. If some spurs are still broken off with the fruit, in spite of reasonable care, they should nevertheless be kept entirely out of the picking bags or baskets, because of the danger of punctures already

(Continued on Page 9.)


Pick "trips" instead of "roads"!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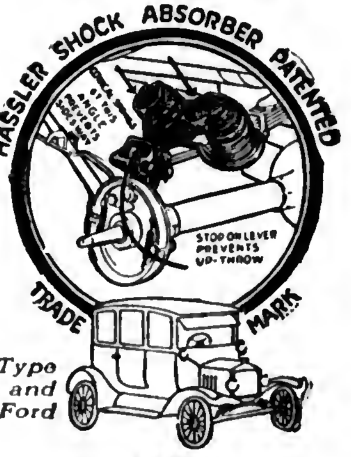
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This Twin Type for Front and Rear of Ford Sedans

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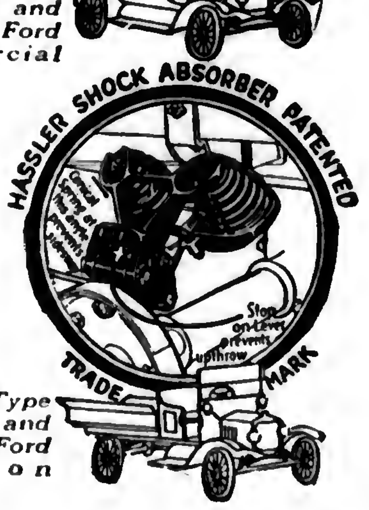
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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880 PUBLISHED WEEKLY

The Lawrence
Publishing Company
Philadelphia

N. Y. Farmers Organize For Business

Grange L-F Exchange Provides the Machinery Necessary for Development

Robert L. Voorhees
Syracuse, New York

The farmers of New York State have helped lead the way in straightening out the agricultural tangle. If there is anyone who wants to dispute that fact, let them point to anything finer than the Grange League Federation Exchange, Inc., which became definitely established on June 28th, when it formally took over the assets, liabilities and good-will of the New York Grange Exchange, Inc., which had been operating successfully for almost two years on a capital amounting to just a little over $30,000.

The principle upon which the new G. L. F. Exchange, as it is commonly known, is based is an economic one which has been brought more forcibly to the attention of the farmers of the country during the past twelve months than ever before. It is simply this. In order to maintain the farming industry upon a sound and profitable basis it is to the advantage of the farmer to control his product more completely. Too often the dealer or distributor has the margin on prices between the producer and the consumer in his favor, and the farmer does not receive his share of benefit from an improvement in the market.

During the present period of money inflation and extended credits it has become more and more essential that this condition be changed. Combined with other handicaps, tho this one is the most serious, as far as the farmer is concerned, it has been very depressing to the development of agriculture and the production of food so badly needed at this time. The worm has turned. Owing to this the farmer has resolved to have his own warehouses, and to store products that he still owns in them. When the market improves it will benefit him and in like manner he will be compelled to insure against a falling market. The medium for this work in the Empire State is the G. L. F. Exchange.

It would be too much to say that this movement will spring into full operation at once. It cannot. But one thing is sure and that is, it has all the qualities needed for success. First, it has correct purpose. No farmer will doubt that. Second, it has tried men to direct it. Third, it has proven methods and experience upon which to work. It fills a need as is indicated by the way in which farmers of New York State support it.

It is only necessary to point to successful farmers' the cooperative buying and selling associations in this and other countries to prove that its purpose is correct. It is headed by men who are known among farmers in the state to be worthy of confidence. W. L. Bean of Cortland is president. He has been president of the Grange Exchange since its incorporation and has made a marked success of its work. Sherman J. Lowell of Fredonia, master of the National Grange, is one of the directors. He is known and respected thruout the country for the work he has done in the interests of agriculture. H. E. Babcock, for a long time county agent leader in the state, is secretary. Raymond Hitchings, member of the Hitchings Fruit Farm Company in Onondaga County, is vice-president.

The new Exchange will develop the work now carried on by the State Grange Exchange, which has been operating for 22 months. Starting with a capital of only $30,000, it has built up a business amounting to $100,000 monthly, closing its books on June 2, 1920 with all its indebtedness paid, a comfortable reserve piled up, and a fund paying 6 percent on its outstanding stock. Men leading the new movement are strongly of the belief that this experience predicts the success of the new exchange, as it will in the beginning merely take over the business with the added advantage of a stock issue of $1,000,000, which will allow of greater development when necessary.

Farmer Crowning the Road With Tractor

A campaign to sell the 200,000 shares of common stock, valued at $5 a share, to farmers of the state ended on June 28, 1920. In only a week it was demonstrated that farmers were interested to the extent of oversubscribing the stock in many counties and reaching their quota in others. Stock will be sold until the full million dollars worth is absorbed. It is estimated that this should be done easily before the beginning of next year. Considerably over half is sold at present.

The first big work undertaken will be to develop a feed business for dairymen and stock raisers. It is estimated that members of the Dairymen's League in the New York state alone purchase feed annually amounting to 450,000 tons, costing them $25,000,000. A good-sized feed business is being done at the present time and with such an opportunity in view it should be possible to increase the amount of feed trade rapidly. It will also be possible to contract for feed in quantity, to demand standard grades, and better transportation and terminal facilities. The officers of the Exchange have secured the services of Professor E. S. Savage of the State College of Agriculture at Ithaca to go to the Middle West and investigate feed conditions. Thus the Exchange believes it has assured itself the best information in regard to market standards in the feed business possible to secure.

Another big item on the program is the building up of a fertilizer business. This has already been developed to some extent by the present exchange, but it is hoped eventually to supply a much larger number of farmers in the state with their fertilizer needs. There will also be a seed department. Great work has already been done in building up the output of Luce's Favorite seed corn in Suffolk County, New York. This seed is almost entirely handled by the Exchange. A seed expert from the College of Agriculture has also been sent into the West to purchase supplies of dependable seeds.

At present it is contemplated to build up the buying end of the business first. Later, however, the Exchange hopes to have its own warehouses in every part of the state and will act as the selling agent for the farmer. Eventually this will become the biggest part of the business because it will amalgamate many of the various agencies now engaged in the same work thruout the state. The question has been asked, why should the sheep breeders have one organization to pool and sell their wool, the dairymen another to sell their product, and so on; why shouldn't all of that work be done by the G. L. F. Exchange? It should —eventually. But not now. As a big business man of Syracuse said, "farmers have not bitten off more than they can chew in this proposition, but it is an almighty big chew if it isn't handled just right. It has more difficulties before it than almost any other business proposition that I can think off." Growth has got to be slow.

The main thing is that the principle is right and the right kind of men are in back of it. New York state has the machinery necessary to concentrate its agricultural activities that every state is sure to need within a few years. Hard work and sound thought are the things most needed for its utilization at this time.

FLORIDA GROWN DASHEEN MARKETED IN NEW YORK

The first carload of American-grown dasheens recently arrived at New York. They were grown on the east coast of Florida. Owing to the limited quantities shipped to market at present the vegetable, which is recommended as a substitute for the potato in locations where that crop can not be grown, is high in price, selling for as much as 15 cents a pound in New York within thepast week.

The Trinidad dasheen, which is a particularly fine flavored variety of the taro, is one of 46,000 foreign plants introduced into the United States by the Department of Agriculture. It was brought here in the belief that it would yield the South a tuber crop which could be used to supplement the potato. It contains 50 percent more starch and 50 percent more protein than potato.

PENNSYLVANIA FARMER
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ESTABLISHED 1880

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PHILADELPHA, PA., JULY 17, 1920

VOLUME 48 NUMBER 3

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Farming as a Vacation

ACTING upon the suggestion contained in the information gathered by the Federal and State departments of agriculture, the National Security League is calling upon city vacationists to hire out to farmers and thus aid in overcoming the menace of a food shortage due to the scarcity of farm labor. We have no criticism to make on the good intention of the League, but taking their published argument as a whole it is likely to produce more trouble than help for all concerned. The biggest mistake they make is in publishing the amount of wages to be expected, which is stated to be "from $4.50 to $7.50 per day," together with board and lodging. Without saying anything about the merits of the question, we venture to say that the average farmer will not pay any such wages to the average city vactionist, simply becuse he can't afford to. Paying such wages even to hardened and experienced help is a gamble pure and simple, and it would be suicidal in the case of inexperienced office men. The article put out by the League contains these words: "The work would not only benefit them physically and financially, but they would help to bring down the high cost of living for themselves and for everybody else." The practical farmer will ask at once how much the cost of his produce would be if he should have to pay $4.50 to $7.50 per day for green help. Two weeks' experience at real farm work would be mighty good for every city man, and we agree that many of them could actually render some service, but it is worse than foolish to excite their expectation of receiving two or three times what they can earn.

The Quest for Fundamentals

COMPARATIVELY few farmers of Pennsylvania are yet aware of the important work that is being done by the State Experiment Station in the effort to discover the fundamentals in restoring and maintaining soil fertility on two types of soil in this State. One is located at Snow Shoe, in Center County, on DeKalb soil, and the other is three miles from Columbia Cross Roads in Bradford County, on Volusia soil. These two types, together compose by far the larger part of all the State and the necessity of discovering their fundamental needs in lime, fertilizer and management is very great. The individual farmer is not able to experiment as fully or as carefully as the case requires, and besides that, it is not economical when the lessons may be learned by all farmers on the same type of soil from one series of experiments on that type. Both these types of soil are naturally less fertile than some other soils of the State, and in addition to this, some of the worst farming of the State has been carried on on these soils during the past 100 years. While these two experiments have been conducted only three or four years, it is already well established that the two most pronounced needs on both of them are lime and phosphoric acid. Other valuable lessons as to other needs, rotations, frequency of application, amounts, etc., will be learned as times goes on. It is interesting to note that the findings so far are in line with the practice of the best farmers on both soils.

The Farmers' Field days have become a feature in connection with these experiments are most valuable and every farmer within auto-driving distance should make it a point to attend all of them. It is the easiest and cheapest way to get definite information and it is in a form that a man may read as he runs. Professor Gardner and Professor White deserve the interest and co-operation of all farmers for their splendid work, and it is to be hoped that funds may be made available so that a score of such experiments may be established thruout the State.

National Politics

WITH the close of the Democratic Convention the country has before it the platforms and candidates of the two big political parties. Both parties have in them quite a large percentage of voters who are not pleased with the work of the conventions, yet it does not seem likely at this time that any extended effort will be made to form a third party. Stripped of their partisan arraignments, both platforms read singularly alike with the exception of the references to the treaty and the League of Nations. In neither one is there a "paramount issue," altho groups in both parties tried to make such of the treaty and the prohibition questions. However, it is altogether probable that, as the campaign develops, candidates and leaders will be forced to declare themselves on many questions in spite of the evident wish of politics to straddle important issues.

In our issue of June 19th we published a synopsis of the Republican platform, and give herewith a short outline of the platform adopted by the Democratic convention, omitting the purely partisan recital which forms a large part of its contents:

League of Nations.—The ratification of the Peace Treaty is advocated, with reservations making clear the obligations of the United States; also, the League of Nations is favored as the surest means of maintaining permanent peace.

Ireland.—Sympathy is expressed with Ireland's aspiration for self-government.

Tax Revision.—Taxing reform and a searching revision of the war revenue acts to fit peace conditions is advocated so that the wealth of the country may not be drained from productive enterprises. Public economy is urged.

Tariff.—The traditional policy of a tariff for revenue only is reaffirmed. The party policy of basing tariff revisions upon the research work of a non-partisan commission instead of upon the demands of selfish interests is approved.

Senate Rules.—The alteration of the Senate rules so as to permit the prompt transaction of business is demanded.

Agricultural Interests.—Sympathy with agriculture is declared and the agricultural bills passed during the past seven years are commended. These include the Farm Loan banks, the Smith-Lever agricultural extension act, establishing the Bureau of Markets, the Bureau of Farm Management, the cotton futures act, and the grain grades bill. The platform favors legislation that will give the right of collective bargaining and approves of comprehensive studies of farm production costs.

Labor and Industry.—The party professes to be the firm friend of honest labor and "points with pride" to the enactment of bills establishing the Bureau of Labor, plans for arbitration of disputes, the child labor act, the eight-hour act, the act for vocational training. Approves of a fair trial of private ownership of railroads without Government subsidy.

Highways.—They favor a continuation of the present Federal aid plan of building highways.

The Trade Commission.—The party heartily endorses the creation and work of the Federal Trade Commission and recommends an amplification of its power.

Mexico.—Our relations with Mexico should be characterized by good will and the people should be assisted to establish a stable government without let or hinderance by interference from outside influences. The party approves of the present policy of this government in that respect.

Merchant Marine.—The platform congratulates the American people on the development of a merchant marine totalling 13,000,000 tons; this amount being constructed since 1916.

Woman's Suffrage.—They endorse the proposed nineteenth amendment granting equal suffrage and urge its ratification by the remaining states.

Armenia.—Like the Republican convention, they express sympathy with the suffering Armenians but promise nothing beyond moral support.

The Philippines.—Favor the granting of independence without unnecessary delay to the 10,500,000 inhabitants of the Philippine Islands.

Our Washington Letter

Little has been said or written concerning the Anderson Packer Control Bill, H. R. 14,387, which was introduced in the House a day or two before Congress adjourned, and was referred to the committee on Agriculture. This bill is of vital interest to stock raisers, because it is the last word in packer legislation and will be the measure that will engage the attention of Congress when it reassembles this fall.

The new Anderson bill is a compromise measure. It is not as drastic as many of the advocates of packer control would like to have placed in the statutes. Nevertheless, it is probably the best that can be secured under the present line-up of Congress. In drafting the bill Representative Sidney Anderson, of Minnesota, undoubtedly did his best to prepare a bill which would stand some chance of getting out of committee and at the same time provide for effective control of the packers.

A former bill provided for a Federal Live Stock Commission, but Chairman Gilbert N. Haugen, of the Committee on Agriculture, would not stand for the creating of any more commissions. The revised Anderson Bill, officially known as the "Packer and Stockyards Act," meets this objection by putting the packers under the control of the Federal Trade Commission and the stockyards are to be governed by the Interstate Commerce Commission. The bill is designed "to promote agriculture by regulating the distribution of live stock, live stock products and eggs, and for other purposes."

When the commission finds that the accounts of any packer do not fully and correctly disclose all transactions involved in his business, the commission may prescribe the manner in which such accounts shall be kept, and any packer who does not keep the accounts as prescribed by the commission shall, upon conviction, be fined not more than $5000 or imprisonment not more than three years, or both.

The term "stockyards" in the Anderson Bill does not apply to a stockyard in any calendar year if in the succeeding calendar year there were not handled at such stockyard 150,000 or more head of cattle or 500,000 or more head of hogs.

* * *

The National Board of Farm Organizations is promoting a movement to erect a temple of agriculture in Washington, with considerable success. Twenty-one states have contributed to the temple fund, according to Charles W. Holman, who has charge of this campaign. Pennsylvania now leads in the East, with Maryland in second place. At the Chicago meeting the Farmers' Equity Union announced that it was ready to start a move to raise money for the temple, and the Kansas Farmers' Union will begin the work soon. The present effort of the National Board is to raise sufficient funds to pay for the building it now occupies, but it is planning to eventually erect in Washington a building which will do credit to American agriculture.

The trustees of the temple of agriculture have made a proposition to the executive committees of the Farm Bureau Federation and the National Grange for the co-operation of these organizations with the National Board in the project of erecting the temple, financing and owning the building jointly.

The executive committee of the National Grange met at its Washington headquarters last week and now has this matter under consideration. The committee also completed arrangements for holding the annual session of the National Grange in Boston, Mass., beginning November 10, 1920. The meeting will be held in Mechanics' Hall the first week, and the second week it will be held in Fanieul Hall. At this meeting there will probably be the largest Seventh Degree class ever initiated in the National Grange at one session. At Grand Rapids, Mich., last year 1500 were initiated. The record class was at Manchester, N. H., several years ago, when 5000 persons were initiated into the Seventh Degree.

* * *

The fruit growers in Northern Ohio and West Virginia are having trouble in getting baskets, owing to a lack of cars and storage facilities, and the Farm Bureau has been trying to get cars sufficient for the purpose of moving the basket supplies into the fruit districts.

Delegations of farmers from all parts of the country are getting into the habit of coming to the headquarters of the American Farm Bureau

Federation, the National Grange, and other organizations maintaining offices in Washington, for the purpose of securing the assistance of these organizations in their efforts to secure a hearing in Congress or the departments. They find these farm organization headquarters a great convenience, and as the representatives of these organizations are in close connection with the various departments, the farmer delegations find it much easier to transact their business and secure a hearing before the farm organizations established headquarters here.

The Farm Bureau Federation is making some progress in its proposition to get grain carried from the Northwest by boats by way of the Great Lakes and the New York barge canal. The Government has a number of boats partly built at the head of the lakes. These boats will have a capacity of 120,000 bushels of grain, but owing to their deep draft they can only load one-third this amount from the elevators. The Farm Bureau is attempting to get the Government to adopt plans of boat construction or remodel the elevators so that a full cargo of grain can be loaded and carried to market.—Reynolds.

HARRISBURG LETTER

Wheat Crop Sizing Up.—From all accounts the Pennsylvania wheat crop is not going to show as great a loss from Hessian fly and wheat smut as feared a month ago when some alarmist reports from southern counties got into circulation. The harvest reports are telling of what State experts consider a pretty fair condition, better in some localities than expected. In the southeastern counties, where wheat raising is a specialty, there is a considerable "helping out" by farmers so that communities are being cared for in good shape, everything being taken into account. More harvesting is being done on a neighborhood basis this year than heretofore. In some of the counties arrangements for threshing in the field are quite general. Several of the eastern counties have reported need for people to cut hay, as a big crop has come in right about the time of the wheat harvest.

Warning on Fertilizers.—Special attention is being urged by the State Agricultural officials for the early ordering and careful selection of fertilizers for the work that will follow the wheat harvest. Exhaustive tests of thousands of samples have been made at the State laboratories here and the results have been classed as fair in the great majority of instances. Secretary Fred Rasmussen has asked national and railroad authorities to bear the importance of fertilizer shipments in mind in the late summer so that there may be prompt deliveries and the material not reach farmers too late in the season.

The Barn and the Rod.—Figures compiled by the State Bureau of Fire protection show that of 145 farm buildings struck by lightning just 144 did not have lightning rods. A special inquiry was made into these gures and the fact that only one which had a rod was damaged is considered striking. Of a total of 3786 losses due to lightning striking buildings of various kinds in cities, towns and the country, only twenty losses were sustained on structures which had rods.

Many After Rewards.—The manner in which claims for scalps of weasels are being made at the office of the State Game Commission indicates an effort to clean up these pests, especially in neighborhoods where chicken raising is carried on regularly. Last year the State paid almost $50,000 for weasel bounties from the hunters' license fund. It is likely that owing to the damage being done by bears that some changes in the limit may be allowed and hunters permitted to kill two or three in certain areas. Bears and deer have been reported as causing damage in some of the northern counties of the State, while in southern and central counties deer have been seen on many farms.

New Weed Law.—Secretary of Agriculture Rasmussen plans to draft a new law to keep down the weeds. The Secretary has found that because of the scarcity of farm labor there has been a spreading of weeds in fence corners and field borders, while along roads they have not been kept down any better than on vacant lots in cities and towns. The Secretary has called attention to the dead loss due to weeds and plans to ask the next Legislature for a law that will help exterminate the more troublesome sort.

The Forest Lands.—Commissioner of Forestry Gifford Pinchot has started to put his conservation ideas into operation in regard to the resources of the State forests and will have all the material and potential resources listed and filed away for future use. Prospecting for oil and gas will not be permitted, by ruling of the commission, until the need is greater and the State can get the benefit; a committee of experts will investigate possibilities and resources on all State lands and control experiments and inquiries, giving the State the benefit, while all foresters will ascertain facts about land desirable for forest reserves and which may be purchased. At the same time the State may condemn land which it needs and which people who own it are trying to hold for fancy figures. The commissioner is cutting his force to stay within his appropriation and has declined to continue men at salaries which he does not consider give a living wage to trained men. This is a new idea at the Capitol and while rather rough on the men will get the force within limits that can be cared for and provide trained foresters for private and corporate concerns.

Road Work Held Up.—State road construction is being held up for two causes; inability of contractors to get cars of cement and stone has retarded over sixty contracts and the State has had to exercise its authority to get car service. The other reason is that prices have become so high that only contracts of an urgent nature are being let. Some of the contractors, who have been up against unusual conditions, have been inclined to protest against the disposition of State authorities to hold them to specifications, but it is not going to do much good.

A Thousand Arrests.—Indications are there will be a thousand arrests of dog owners, mainly farmers, for failure to license dogs this summer. The Department of Agriculture has caused over five hundred and fifty arrests already in central counties and State game officers have arrested probably two hundred more. Investigations are in progress in other counties and are said to show disregard of the law by farmers, including some sheep owners at that.

Apple Survey Progresses.—Reports on the first week of the apple survey are declared to be gratifying. Some kicks at the length of the report blanks have been heard, but in the main the disposition of orchard owners is to give full data. State officials believe when the survey is finished farmers will realize the money to be made in fruit raising in Pennsylvania.

NEW YORK LETTER

Market Notes.—Most bunched vegetables and staples, like potatoes and cabbage, are higher than at the same date last year. New potatoes last yer were $4.56 to $5.50 per barrel, now $12 to $12.50; old potatoes, best, 165-lb. sack, were $1.50 to $2.25; now $5 to $7. Cabbage, per bbl. was $1.50 to $2.00; now $2.50 to $3.00. Lettuce was 50 cents to $1 crate; now $125 to $1.75. Onions were $3 to $3.75; now $1.25 to $1.75. Peas were shipped in big lots last week by Madison County growers at price lower than last year's, String beans are more than double last years' price.

Egg Breakage.—This is so high in recent weeks in both freight and express shipments that the Farms and Market Department has called a conference of railroad officials this week to see what can be done to prevent such loss. The loss runs to $10,000 per week from one State alone. While rules regarding packages and fillers used are far more stringent than ever before

New Commissioner of Agriculture.—George F. Hogue, former head of the dairy products bureau, has been appointed to the office of Commissioner of Agriculture. He was born on a farm and now owns 1500 acres and a fine herd of 200 Holsteins. He has been a rural teacher; also a maker of cheese, owning cheese plants that turned out over 11,500,000 pounds of cheese a year. It is hoped that he may have a practical knowledge of farm affairs exceeding that of most officials in such positions. There is a movement to have the two departments of the State Council of Farms and Markets, which made this appointment, governed by one head so as to avoid the present expensive duplication of effort.

Keeping a Cow.—The Federal dairy division has announced figures obtained over a period of years, covering the cost of keeping a cow a year. The leading items of expense are as follows and the total may be found by giving current values to the items: Concentrates, 1.02 tons; dry roughage, 3.64 tons; hauling and grinding concentrates, $1.53; bedding, .36 tons; pasture, 1.36 acres; human labor, 164.5 hours; horse labor, 16.2 hours; overhead and other costs, $27.11. Credits other than milk, manure, 6.8 tons; calves, .87 of one calf.

Road Officials Confer.—Over 300 county road officials spent several days in conference in Auburn this week and in study of important pieces of construction.

Milk Survey.—G F. Hogue, the new Commissioner of Agriculture, is having a survey of the milk supply of the State taken by counties. The object is to learn facts that will help to avert milk shortage by diverting milk, estimated at 50 per cent. of the total supply, intended for manufacturers, into the raw milk market when needed. It has been said that the Syracuse supply would be nearly 20 per cent. short.

Cattle Exhibits.—St. Lawrence County will have big Holstein and Ayrshire exhibits at the fair. Cayuga will be a big competitor of Onondago County in showing Guernseys.

Dairymen Get Record Order.—The Cayuga County Co-operative Dairymen's League plant has secured the record sized order of 125,000 cases of condensed milk, each containing forty-eight 14-ounce cans. It is expected that the plant's new equipment will enable it to fill the order with the help of other co-operative plants of the State. This is the first American contract for European delivery of milk products since the war, and it was effected through the American Relief. The plant was capitalized a year ago at $100,000. Since then $300,000 has been spent in machinery and extension, the condensing plant alone costing over $25,000.

NEW JERSEY LETTER

Prepare For Fair.—Already arrangements are being made by produce growers from among the New Jersey farms and from Pennsylvania and Delaware for reservations in the exhibition buildings at the grounds of the Interstate Fair here, and Major Mahlon R. Margerum, secretary of the exhibition, feels that the season of 1920 will witness the most extensive and best exhibits of vegetables, fruits, cattle and other interesting products of the farm. Additional space for the exhibition of agricultural machinery will be the result of efforts that are now being made in that direction. Large tents will be erected near one of the main exhibition buildings, where a great array of farm goods will be seen in combination with those of the General Motors Company, which pleased the agriculturists at the fair in 1919. The exhibition will be opened on Monday, September 27th, and continue until Friday, October 1st.

Would Limit "Spreads."—The New Jersey State Federation of Women's Clubs, in co-operation with the State Bureau of Markets, has started propoganda to limit the retailers' "spreads" between buying and selling prices to 50 per cent. of the buying price. For the past four weeks local committees of women from ten of the prominent cities in New Jersey have reported retail prices once each week to the bureau at the State House while the agents of the bureau have reported wholesale prices of products of the farm. Gross profits of from 75 to 200 per cent. have been found to be common. It is held by the bureau that this is too great, and that it prevents the full use of nearby grown valuable food products by the general public and discourages production thru lack of demand. It is claimed that 50 per cent. between cost and selling prices is sufficient on any kind of produce.

Rains Interfere.—Heavy rains in New Jersey have interfered with haying and cultivation of corn and potatoes, which in some instances were becoming weedy. Much haying was accomplished, however. Meadows and pastures continue their growth thruout the State. Corn is mostly a fine crop, but this, with wheat, oats and rye would be improved with more continued warm and dry weather. Some rye is now being cut and wheat is nearly ready. There is a very good crop of potatoes and some are going to market in southern counties. The second cutting of alfalfa is about ready in those sections of New Jersey. Practically all truck is doing very well.. Sweet potatoes present an unusually fine appearance.

New Organization.—The producing, preserving, drying, canning and otherwise treating produce grown by its members are among the principal objects of the Holly Fruit Growers' Co-operative Packers' Association, which has been chartered in the office of the Secretary of State to operate from an office located at Mount Holly. Prominent persons interested in the welfare of the producer in all parts of South Jersey were among the incorporators of the association. They are Harold Hornor, Mount Holly; D Budd Jones, Vincentown; Merritt W. Smith, Mount Holly; George T. Reid, Mount Holly; Barclay H. Allen, Vincentown; Joseph W. Jones, Lumberton; William J. McFarland, Burlington, and Herbert L. Crippen, Mount Holly.

Big Grange Outing.—National Grange Master Lowell, of Fredonia, N. Y., will be one of the speakers of prominence at the annual outing and picnic under the auspices of the Mercer County Pomona Grange at Springdale Park, near Yardville, on August 2d next. Former Governor William N. Runyon, of Union County, a friend of the agriculturists, and John A. McSparren, master of the Pennsylvania State Grange, will also be speakers. Former Assemblyman Josiah T. Allinson, of Yardville, active in interest devoted to farming in Central New Jersey, is chairman of the committee of arrangements for the event, which may attract, as it usually does every year, thousands of agriculturists from several counties.

Fruit Prices Soar.—The prices of fruits in the markets of New Jersey are very high; in fact, they are soaring all the time. Vegetables, however, are in many instances quite reasonable. Due to the scarcity of the fruit and the high cost of labor in picking them, the cost of cherries is on the increase. Watermelons, apples and canteloupe continue very high in price. It is still quite early in the season for plums, pears and other summer fruit, but some have already made their appearance in the markets at a fancy price and are being readily purchased by housewives. While grapefruit and oranges have continued all along to fetch high prices, bananas have taken somewhat of a drop. Corn is now on the market but it is of rather inferior quality and high in cost, while Jersey potatoes have arrived and the price is more reasonable. Both wax and green beans are selling at rather low prices, as are also beets and carrots.—Kelly.

COMING EVENTS

Summer meeting, New Jersey State Horticultural Society, Henry H. Albertson's Green Hill Farm, Burlington, N. J., July 24.

New York State Potato Association, annual meeting and tour, Cortland, N. Y., August 6-7.

Apple Shippers' Association, Chicago, Ill., August 11-14.

Vegetable Growers' Association of America, twelfth annual meeting, Columbus, O., August 25-28.

Hornell Fair, Hornell, N. Y., August 31-September 3.

New York State Fair, Syracuse, September 13-18.

Agricultural Society of Queens-Nassau Counties, annual fair, Mineola, N. Y., September 21-25.

Farmers' Industrial Exhibit and Picnic, Williams' Grove, Pa, August 30-September 3.

LOOK AROUND---INVESTIGATE BEFORE BUYING A TRUCK

Don't be convinced too quickly about any truck. Talk to truck users—get their experience in upkeep cost, service, etc.—particularly of the truck you have in mind. Benefit by what they have learned.

Pick out any ACME owner—especially a farmer. Ask him all about his experience with an ACME. That's the sort of test every farmer, thinking of buying a truck, should use. It's the sort of test we like because we know that every user of an ACME will sell another ACME.

Write us for list of Farmers Owning Acme Trucks and Illustrated Booklet

LIPPINCOTT MOTOR CO.
2120 Market St., Phila., Pa.

Summer Feeding Makes Winter Profit

Repeated tests prove that cows cannot thrive on pasturage alone. A herd that is fed only on pasturage during the summer enters the fall and winter unprepared for winter feeding; the milk flow decreases and your milk checks slump badly. Building them up again is a long and costly process; it takes time and trouble to get them back into shape. In addition to pasturage feed them

International Special Dairy Feed

Protein 15%, Fat 4½%, Carbohydrates 50%

This *guaranteed* feed contains all food elements necessary for health and energy and supplies the milk-producing qualities lacking in pasturage. Your herd will enter the fall and winter in prime condition, with a maximum milk flow—which means less trouble in care and feeding and fatter milk checks right from the start.

Begin Feeding International Special Dairy Feed TODAY and Watch Results

International Ready Ration—20% Protein, is a bulky, satisfying feed that will bring your herd to a high state of milk production. Cows like it.

International Diamond Dairy Feed—24% Protein, is a splendid high protein conidtioning feed and a particularly good one for growing stock. It makes healthy animals.

INTERNATIONAL SUGAR FEED CO., Minneapolis, Minn.

Mills at Minneapolis and Memphis *Live Salesmen Wanted*

DAIRY

THE FOOD VALUE OF MILK

The U. S. Government says "Milk is the Best Food We Have."

This is a broad statement, but nevertheless, true. The value of milk is being shown more every day, as experiments are being conducted both by the scientific man in the laboratory, as well as by the so-called practical man dealing with conditions as they are found every day.

One of the many examples now at hand to prove the food value of milk is that of the McKinley Public School of Columbus, Ind. Dr. Clouse, School Physician, made a careful survey of the children in this school and found that 75 percent of them were underweight, suffering from undernourishment in its various stages. This condition she found was not due to poverty, but simply to improper feeding. Pickles and pastry, doughnuts and candy, were being eaten in quantities, while wholesome, nutritious fundamental foods were being neglected.

If all the children of our land had all the milk they could drink, and all the butter and cheese they should have, what a great amount of sickness, suffering and death would be avoided and how much stronger, livelier and happier they would be.

NOTHING WILL TAKE THE PLACE OF MILK.

As a result of these findings the school authorities inaugurated a mid-forenoon lunch each day, by which the children received a half-pint of milk and a bread-and-butter sandwich. The children each brought the sandwich with them, while the milk was delivered to the school each day, at a cost of 15 cents a week for each child.

The results of this experiment were most striking, both from the standpoint of increased physical development and also mental efficiency.

Dr. Clouse says "The children were weighed every four weeks, and the average gain for the first three months was 12.2 ounces per month as against a normal gain of 6 ounces the country over for children of the same size."

Some exceptional cases were noted. One girl gained 5 pounds during three weeks as against 4½ ounces for normal. Another child gained 92 ounces in one month, while her average gain for the entire twelve preceding months before the bread and milk lunches had been less than one ounce a month. Another pupil that was 14 pounds under weight at the beginning of the experiment gained four pounds in two months while her little friend, who was denied this lunch by her parents, continued to lose in weight.

As to the effect of this luncheon on their school work, Dr. Clouse reports equal success. The children do better work, she says, their minds are keener and more alert, and they grasp their studies much better and far easier. They also play better, there is less disorder in the school and a pronounced increase in interest in school work is noted.

What more conclusive evidence could one wish to have regarding the food value of milk in the human dietary?

And to think that 6,000,000 children, or one out of every four, are suffering in the U. S. because of the lack of milk in the diet makes one wonder why this problem has not been solved long before this.

Then, too, when milk is so economical, why should any child be allowed to suffer thereby being deprived of the sacred right of being well fed and made healthy and strong.

Mothers and teachers! Check up on your boys and girls. See if they measure up to the standard, and if they do not, look into the problem as this Indiana School did, and save the boys and girls for they make the great nation of tomorrow.

SUMMER DAIRY NOTES

Some cows are so gentle that they can be milked in the barnyard. But this increases the danger of dirt and dust in the milk and is especially true where autos are constantly passing on a dirt road. Flies cause more switching and stamping in the barn yard than in a cool stable and this helps to contaminate the milk. The stable that is screened and cool brings comfort to the cows and makes milking time less exasperating for the farmer.

* * *

The kicking cow that kicks because of flies deserves much sympathy and no abuse. The only wonder is that cows can stand so much pestering from insects with so little kicking and running. It pays to be quiet around the cows and do nothing to make them more nervous when they are as much troubled by heat and pests as their owner.

* * *

The farmer who trains a young pup on valuable cows sometimes loses more milk than the pup is ever worth for driving them. A cow is an animal with a delicately constructed nervous system and it pays to avoid everything that tends to excite the herd.

Veal calves can often be dressed at home and sold to local dealers for better prices that the cattle buyers will pay. Some farmers dislike for sentimental reasons to kill the calves that they have been caring for. It is not a pleasant work but is really less cruel than shipping the young animals long distances by rail. We believe that we have made from $3 to $5 each on calves slaughtered at home and sold to local dealers. They also furnished meals of tongue and heart for home use and blood for mixing in the poultry mashes.

Heifers that are to be retained should be halter broken at an early age. It makes them easier to handle and saves a tug of war later in life when the animal becomes more than a match for the owner.

* * *

A herd bull should never be teased or allowed to find out its strength. It is always a gentle bull that turns on the owner at an unexpected moment. Never trust the bull and always let him know who is boss. Keep him contented and hold his respect but be just enough afraid of him to keep from becoming careless.

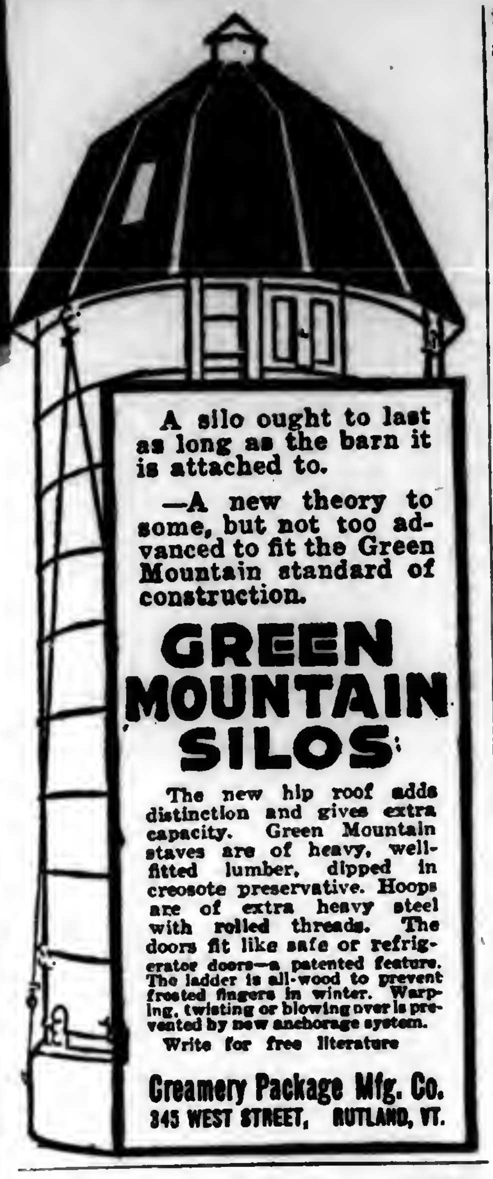
* * *

When the condensed milk factory closed in our section it was a blue day among the dairy farmers. But now they are selling cream and keeping the skim milk for feeding calves, hens and pigs. It has increased the work of handling the milk but we believe it has increased the profits on most of the farms. They seem to receive about as much for the cream as they formerly did for the whole milk. And the milk is fairly good pay for the extra work.

* * *

Some farmer's wives are enjoying more of their life since the husbands started selling cream instead of making butter. When there is a creamery in the section the big churns and power machinery seem to make butter making much easier. And churning and butter working has been work which has caused many women to dislike their life on the farm. More co-operative creameries are needed to boost dairying in some sections.—R. G. Kirby.

Swatting flies can go on forever, but unless the breeding places are removed, it does little good. Ninety percent of the house-flies breed in stable manure.



A silo ought to last as long as the barn it is attached to.

—A new theory to some, but not too advanced to fit the Green Mountain standard of construction.

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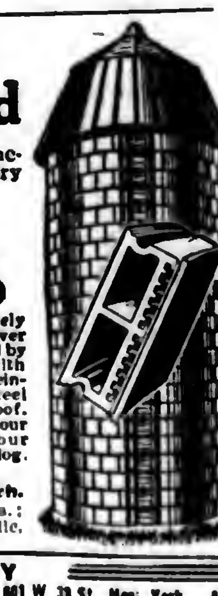

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HAY

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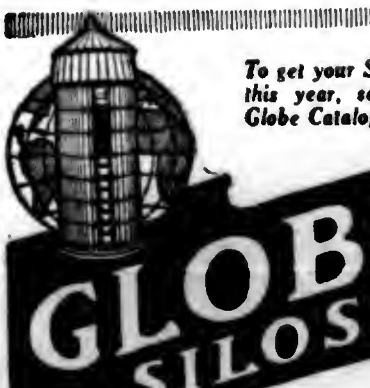

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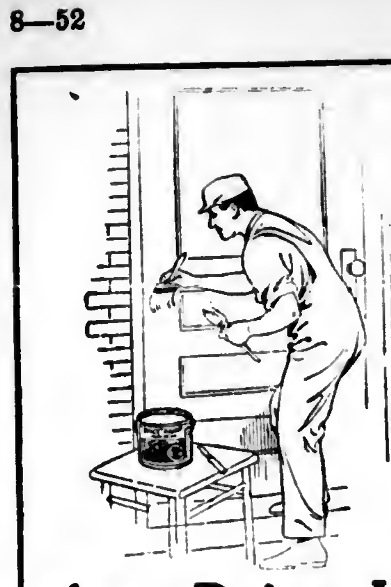

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HORTICULTURE

HIGH NURSERY STOCK WILL DECREASE PLANTINGS

New York orchard men are finding that nursery stock of all kinds is keeping pace with most other commodities in price. Standard two-year-old apple trees are selling for $75 a hundred as compared with $10 a hundred five years ago—an increase of over 700 per cent.

French seedlings have advanced from as low as $25 to $240 a thousand. This makes the young apple tree before it is set out in the nursery row cost the nurserymen 24 cents each.

A Satisfactory Orchard Cultivator

Then, too, there is the general advance in overhead costs, labor and all other supplies. While American seedlings have been raised, long experience shows there is nothing else that approaches the young crab apple started in France. The war upset the industry there and the number that may be obtained even at 24 cents is very limited.

About five years ago there was a great surplus of nursery stock, apples particularly. Tens of thousands of apple trees grew to oversize as a result. Instead of being sold at two years old, when conditions are ideal for transplanting, they grew on to four and even five years old, a total loss to the nurserymen; the brush pile and not the orchard was the end.

Grape Leaf Hopper—Spray Both Sides with Tobacco Decoction

Many nurserymen were forced to the wall and out of business as a result. Nurseries gave way to other ventures and the few doing business today, with a limited stock to offer, are reaping a harvest on sales made at highest prices ever recorded.

Where formerly standard cherry trees used to sell for $20 a hundred the price today is $80 for such standard sour varieties as the Early Richmond, English Morello and Montgomery. The same story runs true of pears Bartletts, Buerre de Anjou, Bosc, Clairgeau, Sheldon, Winter Nellis, Kieffer, Tyson, Seckel and all the other varieties to be found in the big pear orchards of the Western New York district are quoted by nurserymen at $80 a hundred.

Peach trees of the Crawford, Rochester, Carmen or Champion variety may be had in limited amount at $60 a hundred, the same tree selling a few years ago at eight to ten cents each.

Fruit men are wondering what effect all this will have on the industry. As to apples it will undoubtedly have the effect of curtailing the number and size of young orchards set. This to some extent may be a benefit, for in the judgment of a good many experienced orchard men planting had outrun demand.

The fear has been for the last five years that Western New York, along with Southern Pennsylvania, the Virginia section and Maryland, not to mention the numerous sections in the Middle West and Far West, was becoming overset, with the prospective supply outrunning the prospective demand. It has been a much-discussed problem at horticultural meetings, whether or not to set apple orchards. Whatever the decision, based on the general prospects was, the real decision has now been made; there will be mighty few apple orchards set in eastern New York and other fruit districts.

It is reasonable to expect that by the time prices of nursery stock work down to a reasonable level the need for a general resumption of orchard planting will have developed. Particuarly will this be the case because the winter of 1916-17, with its extreme cold, together with the losses from cold and mice of the last winter, have made big inroads, killing thousands of trees, many of them just coming into bearing when stricken.

One of the most serious winter losses is in the case of peaches. If the peach belt of Western New York is to be maintained, then tens of thousands of young trees must be set out within the next year or two. The fact is that nearly that number must be set out each year just as ordinary maintenance, due to the fact that the peach tree is short-lived and ordinarily ten years is about the limit of bearing; in exceptional cases perhaps slightly more.

But it is a fair assumption that at least one-twelfth of the peach orchards of this territory should be replaced each year, or the equivalent area, by young trees, if the present acreage is to be maintained. But with peach trees costing 60 cents each, no one has any idea of planting heavily, particularly with the crop a failure, practically for the last two years, and the prospects that it will be very light in 1920.

In point of acreage and total crop, which in 1916 reached a little more than 6500 cars in Western New York, the district has probably reached its peak for some time to come. However, in point of price, the forecast is for higher prices, due to an increasing demand and a lessening supply, at least for five years to come.

Last winter was a hard one on peaches thruout New York's belt. In some sections the orchards give no promise of a crop, while in others the showing for a scanty crop, largely confined to the top centers of the trees.—Alvah H. Pulver, Wayne Co., New York.

AMERICAN FALL FRUITING RASPBERRIES

Two good fall fruiting varieties, the Ranere (St. Regis) and Erskine (Erskine Park) have originated in the United States and are now in the nursery trade. The Ranere was found near Hammonton, N. J. It is the principal commercial raspberry of New Jersey, and seems destined to become the leading sort along the Atlantic Coast States as far south as southern Georgia. The variety may be found fruiting freely thruout the fall months in Atlanta, Ga., and even further south where other varieties do not succeed.

In the cooler parts of the northern states the Ranere produces fruit of too small size and of too poor dessert quality to be of great value. However, the berries borne on the young shoots in the autumn are larger in size and better in quality than those of early summer, and if pruned after

e English system, where all the old nes are cut out in late autumn or rly spring, it should be desirable in any northern gardens.

The Erskine raspberry, which was und by a resident of Lee, Mass., in patch of Marlboro, bears larger ruit than the Ranere. The fruit is lso of better quality, and if it proves s hardy and bears as well thruout the northern states as it has under the care of the one who discovered it, it should be especially desirable. The Erskine seems to be a hybrid between the American and European red raspberries, and should be tried wherever the Cuthbert and Marlboro succeed.

NEWER APPLES DISPLACE BEN DAVIS

Apple varieties of equally late season and better quality are slowly displacing the Ben Davis apple, which at one time was one of the most popular of all late keeping apples.

Cold storage for apples of better quality makes it possible to compete with the Ben Davis apple which is generally regarded as being decidedly inferior in quality.

The Ben Davis has long been known as a money maker because of its regular and profuse bearing and late keeping. Some orchardists are still unwilling to discard the Ben Davis as having no place in apple culture, but the better varieties are slowly displacing this one when new orchards are set out. Bearing orchards of this variety, however, are still quite profitable.

The origin of the old Ben Davis variety is not definitely known, being accredited to Virginia, Tennessee and Kentucky nurserymen.

Manufacturers of mincemeat sometimes prefer the Ben Davis for the apple portion of their product because the small pieces retain their shape and identity.

TREE AND PLANT INSPECTION

The New Jersey Bureau of Inspection during April examined 128,124 nursery trees and 35,000 berry plants brought into the State, and rejected 7369.

Most of the inspections were made in the southern counties of New Jersey and the fact that 7369 were rejected on account of crown gall and hairy root indicates that it is not safe to set out large numbers of trees until the roots have been examined. While the total number of rejected trees constitutes only 5 per cent. of those examined, a single shipment may contain a much higher percentage of diseased trees. No grower would knowingly plant twenty diseased trees in every lot of one hundred. Purchasers are entitled to clean stock and the State Department of Agriculture is willing to help them secure such stock.

LATE BLIGHT OF CELERY

Late blight is the worst celery disease since it stunts the plants badly when they are growing and causes them to rot readily in storage.

The fungus which causes the blight is carried over the winter in old dead leaves and stalks, in manure to which celery refuse has been added, and in the soil itself. Control measures should therefore include a rotation of cross cleanliness in burning up the diseased leaves and stalks in fall and using manure free from refuse of this kind.

In addition to these sanitary measures it may be necessary to spray the growing plants. For this purpose Bordeaux mixture 4-4-50 is the best spray to use. It should be applied as soon as the first spots show in the leaves; if left off till the spots become numerous control is difficult.

SUGGESTIONS ON HARVESTING EARLY FRUIT

(Continued from Page One.)

mentioned and also because they look bad to anyone who really knows their significance.

Store Promptly

Care should also be taken to see that all fruit is moved to market or into storage as promptly as possible after picking. Delays of this kind are especially dangerous during the hot weather during which much of the early fruit is picked. The life processes within the fruit go on much more rapidly immediately after picking than before, and especially when it is kept in high temperatures. In general, two or three days should be regarded as the limit for any tender fruit to remain out of storage or proper cooling, if it is expected to be kept for any considerable time before being used. Delay in cooling usually is responsible for the dull, greasy appearance that one so often sees in fruit offered for sale on the markets. Incidentally, if the fruit has to stand for some time before shipping or storing, it is best left in open packages on account of the better ventilation, which is of distinct importance in securing the best keeping of fruits.

Packages and Other Equipment

For early apples and reasonably near markets, the bushel hamper and the round bushel basket are both used extensively. The latter package is also apparently gaining steadily in popularity for peaches, especially where a large crop is to be moved. It is also likely to be used very extensively for the later varieties of apples this year, on account of the unusually high cost of barrels at the present time. If the handling or hauling is likely to be especially rough, however, the barrel is still the best package—for all the later varieties at any rate.

Other equipment likely to be needed include ladders, picking bags or baskets, crates or lug boxes, sorting and packing tables; sizing machines, if the quantity and quality of the pack are sufficient to justify them; barrel or box presses; barrelling hatchets, nails, basket clamps or hooks; stencils, ink cakes, and brushes, for properly labelling the packages with the variety, grade, minimum size, and the name and address of the grower or of the party for whom the fruit is packed, as is now required by law in all progressive states, and as is also needed on all high-grade fruit in order to secure proper attention from the buyers.

In connection with the ladders, those with pointed top and flaring base are preferable for the higher trees, and the most desirable type of step-ladder is the kind with narrow top, flaring base and a single prop. For the highest trees, extension ladders may be needed. When baskets are used in connection with ladders, they should be fitted with S-hooks so as to permit the use of both hands in picking.

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Vegetable Plants Leading varieties. Cabbage, price per 100, 30c., per 500, 90c, per 1000, $1.50. Lots of 5000 or more, $1.25 per 1000. Cauliflower, 100, 65c; 500, $2.50; 1000, $4.00 Tomato, 100, 40c; 500, $1; 1000, $1.75; lots of 5000 or more, $1.50. Send for prices on all kinds of plants. C. E. FIELD, SEWELL, N. J.

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Time is vital in the fertilizer situation this Fall. The world is short of wheat, the farms are short of labor. Fertilizer is needed more than ever, but the fertilizer manufacturers are short of cars and labor to load cars. It is impossible to supply the fertilizer needed this fall unless the shipping season is lengthened, and this can only be done by starting earlier. Why not place your order now for
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Ask your dealer for Reading Bone Fertilizer.

Write for booklet and further information.

POULTRY

SUMMER CARE OF BROODER CHICKS

This year there will be many late hatched chicks raised with brooders and much care is necessary to keep them growing rapidly and hold down the mortality rate. Overheating is as dangerous as chilling. In running stove brooders in the summer we never use curtains. A moderate fire is maintained at all times and there is plenty of room so that the chicks can get away from the stove when the heat becomes uncomfortable.

We try to keep all the birds away from the chicks and many will be tramped on and stunted if they are always being scared from the feed hoppers. The old birds are on a fenced range and any that fly over into the chick range will have their wings clipped. If it is necessary to feed brooder chicks near the old hens it pays to make small slatted coops in which the chicks can run and eat. This excludes the hens and the chicks soon learn that they are safe when in the slatted coops and they obtain their share of the ration.

Poultry Does Well on Free Range

A clover pasture makes an ideal range for the summer brooder chicks. As soon as they have been taught to return to the hover they can be given unlimited range. They will seldom go many hundred feet from the house until they are nearly broiler size. The abundance of clover on clean fresh soil helps to keep the chicks contented and growing. In the morning they will often leave the scratch feed after taking a few pecks in order to gather their own ration on the clover range.

These hot weather chicks need protection from the sun during the heat of the day. They must be turned out very early in the morning to gather bugs and green food in the cool morning hours. As the sun becomes hot they will need rest and they should not take the rest on the hot dry brooder floor but in the shade of plants where the soil is moist.

Sunflowers and raspberries and corn are growing on our chick range and during the hot days the constant peep of the young birds scratching in the moist soil proves that they like their environment and are not suffering from the heat. The cool shade of evergreens is good for the brooder chicks. All of the plants and trees which furnish shade are also a protection from hawks and crows.

We do not believe that complicated rations are necessary for the summer chicks on range. This year we have used the commercial growing mashes with good success. We have also raised chicks on sour milk, hoppers of bran, plenty of clover which they gather for themselves and three feeds a day of scratch feed scattered on the range. Fine chick feed is used until they are about half feathered out. Then a mixture of wheat and cracked corn is all that is needed. But never neglect the sour milk as it is a great growing feed and saves much money for the poultryman who can produce a few pails of it each day on the home farm.

Sanitation is very important in the brooder house. The house will be dry from the warm fire and thus quite free from odor and seem cleaner than it is. But the fine dry dust which accumulates will be full of unclean material which will be scratched into the air by the chicks. A dusty brooder house cannot be satisfactory for young growing birds. So it pays to clean the house often enough to keep it in the right condition. A good spraying with one of the commercial coal-tar disinfectants will help to keep down mites and lice and it should be used after each cleaning. It takes time to keep poultry houses clean but the saving of a few extra pullets is often good pay for the work.

I sometimes think that the increased cost of baby chicks has been a good thing for the buyers. Now they are apt to buy fewer chicks and give them better care. When good chicks only cost ten cents each it did not seem such a loss to the beginner if he had to bury or burn two or three dead chicks each day which had died because of his carelessness. Now three or four chicks mean a loss of about a dollar when they are a few days old and their value rapidly increases. It means that good brooder sanitation is necessary or there is nothing gained by operating them.

Raising the brooder houses on cement blocks will keep out rats and weasels. During the hot summer these pests are more apt to cause trouble than early in the spring. When the house is raised about a foot and a half the space beneath makes a shaded run for chicks.

We use no curtains on colony brooder houses when the nights are clear. Plenty of fresh air is a necessity for growing chicks. Curtains soon become very dusty and it only pays to use them when severe rains are apt to beat in on the floor. A wet brooder house floor becomes very unclean and cannot be tolerated when flocks of 200 chicks or more are using a small house possibly eight by ten feet in dimensions.

The summer care of chicks is reduced if the colony houses can occasionally be removed to clean soil. At one move it cuts out a lot of contaminated soil and chances of losing chicks. A flock of chicks moved from dirty soil to a clean location will almost immediately show a slight improvement. It reduces the danger from gapes which is sometimes a serious pest on clay soil. On sandy soil poultrymen have little trouble with gapes. We find it can be controlled on any soil if it is occasionally cropped and the chicks are allowed to range on fresh soil as much as possible.

When the brooder chicks reach broiler size it pays to cull them over and only save the best for future breeding work. Late hatched cockerels do not mature into the fine breeding males that can be obtained from early hatched stock. So we always sell the late hatched cockerels from broilers in order to have more room for the pullets. All of these pullets should be on the roosts soon after they are feathered out so that they can be protected from mites and lice and the colds which come from overcrowding on the brooder house floor. If the roosts are crowded it means much jostling and the cockerels will have the best of it. So get rid of the late hatched cockerels unless they are of some special value for showing or breeding and give the late hatched pullets a chance. They are the poultryman's best show for profits next to the early hatched pullets. And this year many poultry keepers on farms are finding that it has had to be a late hatched flock or none and they wish to do the best they can with the material available.

MOTHER'S AUGUST CHICKS

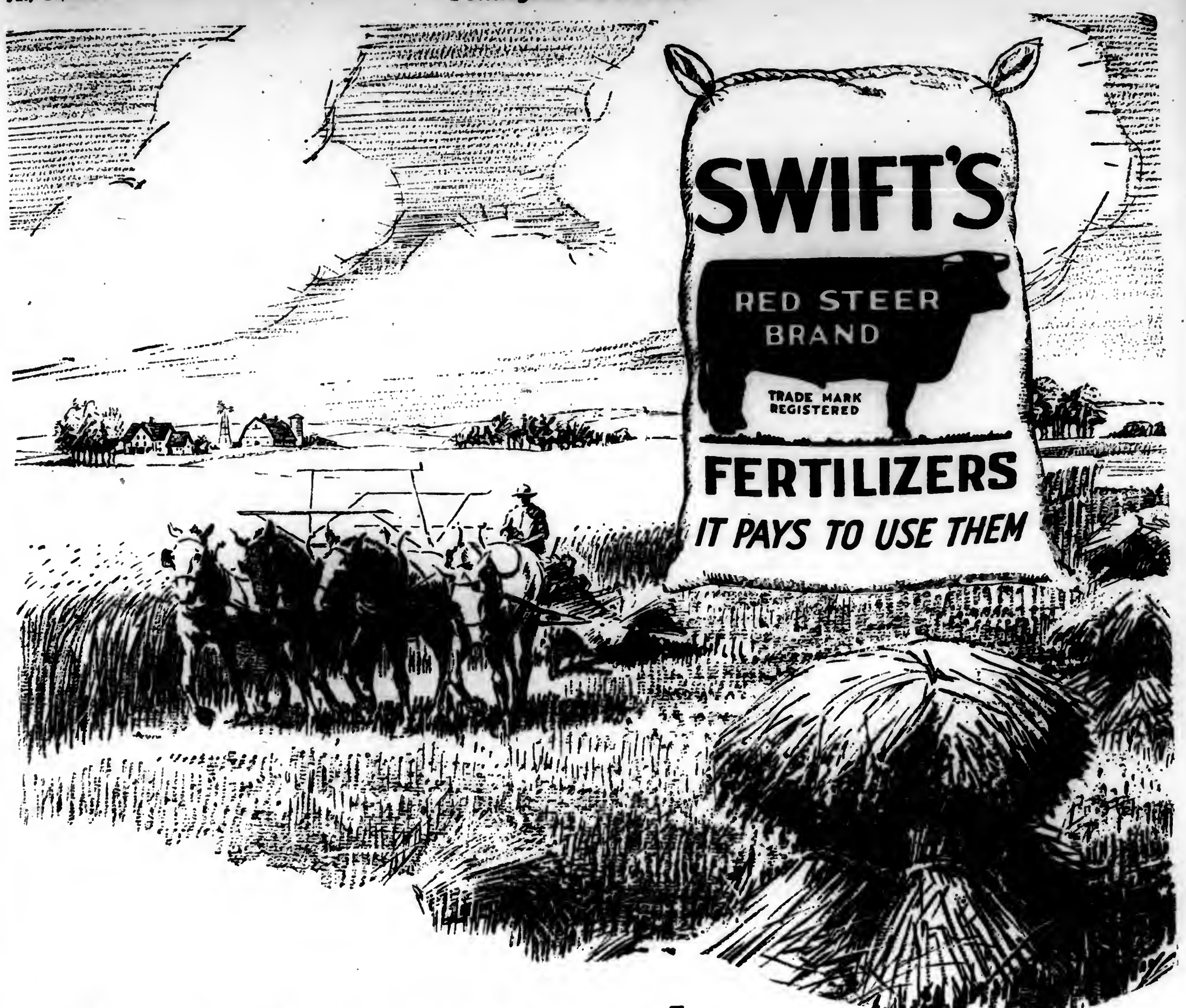
In the good, old days of my boyhood when mother was still alive and able to work and tend the poultry, when the hot days of July would come along, she would invariably say: "Now it is about time to set the hens for the August chicks." Accordingly five or six of the best hatchers would have their broods out sometime before the middle of August, and how the fluffy little things did grow. There always was plenty of sour milk and the hens and chicks were allowed to roam at will. By Thanksgiving, the roosters were quite large and ready to be killed off and the pullets were half grown.

Many object to the late hatches by claiming that the resulting pullets will be undersized and scrubby and that there can be no eggs during the first winter. However, mother always met these objections smilingly and said that her August chickens were her best layers. Then this late batch always insured plenty of stewed and fried "chicken" for her brood of hungry little woodchoppers—boys and girls.

The August chicks are the easiest of all to raise. Dry weather has caused the vegetation to wither and whatever of dew there may happen to be on the grass will not harm the little things. They are as busy, plump and hearty as a flock of partridges.

Ever since I was able to hold and carry a basket, I established myself as the chief and only egg gatherer of the family and I can truthfully say that our flock, reinforced as it was every year with the August chicks, beat all the flocks in the immediate neighborhood. There were a number of days in early Spring when as high as from 90 to 92 percent of the hens laid. I know that this is good work from a fairly large flock

Robert I. Weigley.



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	Analysis		
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Swift's 10-4 Fertilizer	0	10	4
Swift's Clay Soil Special	2	12	0

AMMONIA	gives the plant a quick start, particularly necessary when seeding is delayed to combat the "fly," increases vegetative growth, and aids in stooling.
PHOSPHORIC ACID	increases root growth, aids in stooling, plumps the berry and hastens maturity.
POTASH	stiffens the straw and aids in starch formation.

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Swift & Company

"IT PAYS TO USE THEM"

HOUSEHOLD

Lesson on Fundamental Stitches of Crochet Work--Part I.

By Jeanette Bell

(Editor's Note.—Miss Bell has prepared a lesson in crocheting of which this is Part I. We believe our readers will appreciate this because the two parts will contain instructions for making nineteen fundamental stitches and combinations, eleven of which are given here; the balance will follow in Part II. We would suggest that these lessons be preserved for future reference.)

Most crochet workers are familiar with these fundamental or basic stitches of crochet work, yet this office receives many a letter from the puzzled readers, asking the meaning of certain well-known abbreviations and though less frequently, the meaning of the names of the stitches themselves. Therefore, having embodied samples of many of the fancy stitches also, I consider this lesson will prove a page well worth marking and keeping for future reference. This paper is furnishing these instructions without extra charge and saving you the cost of several instruction books.

Illustration No. 1, Chain Stitch, ch st: make a loop on hook, pull another loop through it, forming 1 ch st, repeat for the length required.

No. 2, Slip Stitch, sl st: make a ch, skip 1 st, insert hook into next st, thread over hook, draw through ch st and the loop together.

No. 3, Single Crochet, s c: make a ch, skip 1 st, insert hook into next st, thread over hook and thru ch st, forming 2 loops on hook, thread over hook, through both loops, formin s c.

No. 4, Double Crochet, d c: make a ch, thread over hook, skip 3 sts, insert hook into next st, draw thread through ch, thread over hook, through 2 loops, thread over hook, through 2 loops, forming 1 d c.

No. 5, Treble Crochet, t c: make a ch, thread over hook twice, skip 4 sts, insert hook into next st, draw thread through ch, thread over hook, through 2 loops, thread over hook, through 2 loops, thread over hook, through 2 loops, forming 1 t c.

No. 6, Double Treble Crochet, d t c: make a ch, thread over hook 3 times, skip 5 sts, insert hook into next st, continue as for t c.

No. 7, Treble, Treble Crochet, t t c: make a ch, thread over hook 4 times, skip 6 sts, insert hook into next st, continue as for t c. This is not used often but occasionally for making a long connection.

No. 8, Space, sp; make a ch, thread over hook, skip 7 sts for turn of row, insert hook into next st, * 1 d c, 2 ch sts, skip 2 sts, from * forms 1 sp. This is used for Filet Crochet. To count the ch sts to start a piece, allow 3 sts for each sp, 5 sts to turn. Thus for example, 52 sps, require 161 ch sts.

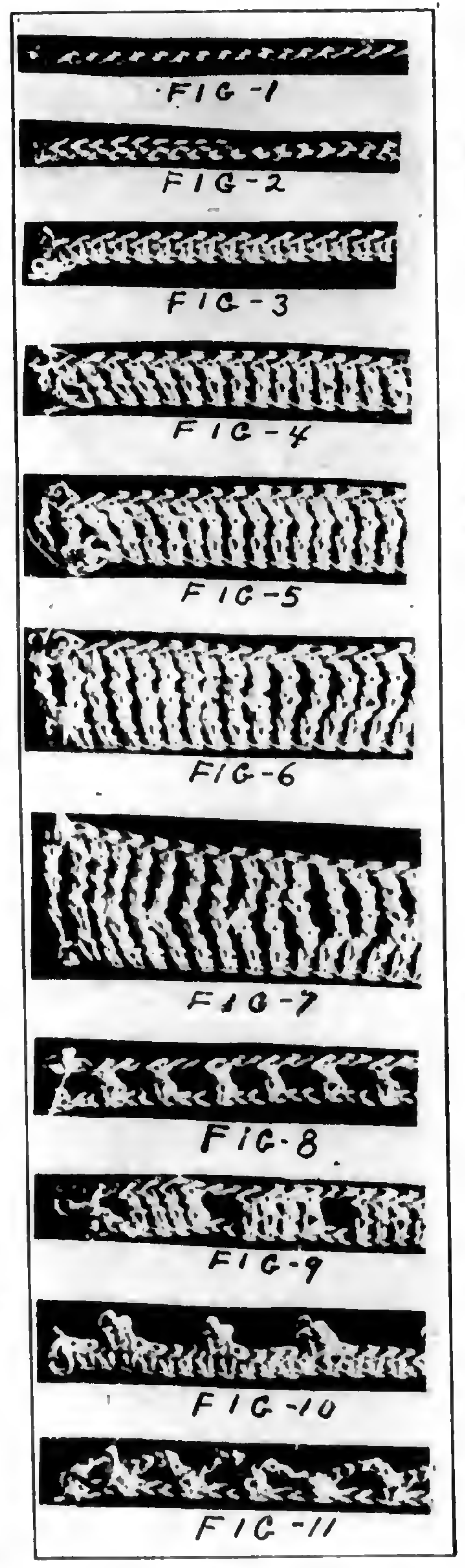
No. 9, group, gr: make a ch, 1 d c into 4th ch st, 1 d c into each of the next 2 sts, forms 1 gr at the turn of a row, otherwise 4 d c into 4 sts, form 1 gr. Where 2 or more grs, join, 3 d s form each gr after the first one. For 2 grs, make 7 d c, for 3 grs, 10 d c.

No. 10, Picot, p: make 4 ch sts, insert the hook into the 4th ch st from hook, thread over hook, draw through both loops, forming 1 p, of medium size, for longer p, guage according to the size desired.

No. 11, Loop, L: make a ch, 1 s c into 7th st, * 5 ch sts, skip 2 sts, 1 s c, from * forms 1 L.

SUNSET PICNICS

One pleasant way to break up the monotony of the long days of work in summer is to plan numerous picnic suppers.



Fundamental Stitches

For these one may go to the woods, to some cool glen, or to the lake where swimming also may be enjoyed.

Do not make the mistake of preparing elaborate lunches for these trips. Simple food, simply prepared, is much more healthful than elaborate repasts and more quickly prepared.

Sandwiches are the basis of such a lunch. These may be made of various meats prepared in an appetizing manner, eggs, cheese and pimentos, lettuce and various other things.

To the sandwiches add a bowl of salad, fruit, cookies or a simple cake with cheese or olives if you wish and you will find you have a thoroly satisfying meal. Hot coffee, tea, lemonade or other fruit drinks can be carried along in a vacuum bottle and kept perfectly cool or hot according to which you select.

The sandwiches and cake should be carefully wrapped in waxed paper to keep them from drying out. Waxed cups can be bought in containers, as can also paper plates. These with crepe paper napkins eliminate much dishwashing.

If the salad is packed in a fruit can or an empty peanut butter jar there will be less possibility of its spilling when jolted about on the way. A vacuum food jar would be still better.

I know of one family which follows an exceedingly simple plan for picnic suppers. They simply carry along with them a loaf of bread, a pat of butter, and purchase weiners, which they roast at the beach, at the market on the way, thus having a little supper of hot sandwiches. They find this quite satisfying.

We enjoy several of these little picnics during the summer and fall. The lake is ten miles away but with a car the distance can be quickly covered.

We usually plan ahead for these little trips so that we shall not be delayed about getting an early start.

By the time the men have come in from the field we see to it that the cows are in from the pasture and milked, that all the small chores are finished, and that the lunch and all other necessary things such as pillows, robes and coats are collected and packed away in the car. With all of these things done it takes only a short time for the evening work to be finished and for the men of the house to dress for the ride.

One gets a wonderful amount of enjoyment from these pleasant evenings and they are usually followed by an extra good night's sleep.

We owe it to ourselves to snatch a little enjoyment and rest during the busy season.

That old saying, "All work and no play makes Jack a dull boy," is quite applicable to farmers as to other people.

Let us play a little more and live a little longer.

—Emma M. Jacobs, N. Y.

TO REMOVE STAINS

With the coming of summer the problem of removing fruit stains from table linen and garments is bound to perplex most housekeepers. Of all stains they are, fortunately, said to be the most easy to remove.

Spreading the stained portion of the material over a bowl and pouring boiling water from a height so as to strike the stain with force will usually remove it. Camphor likewise is used with good effect. Some fruit stains, however, are more obstinate than others. Glycerine sometimes helps in removing peach stains.

Iron rust may be removed in various ways. One way which is effective with white materials is to wet the stained part with borax and water or with diluted household ammonia and spread it over a bowl of boiling water. A 10 per cent. solution of hydrochloric acid, which may be obtained from any druggist, poured drop by drop on the stain until it brightens and then immediately washed out with water is also used. A 10 per cent. solution of oxalic acid made be similarily employed. In either case, a second application may be necessary. A mixture of salt and lemon juice rubbed into the rust stain and placed in the sun sometimes will remove the rust. This is, however, a much slower process.

Ammonia for Grass Stains

A solution of ammonia and water or alcohol and water will remove grass stain. Either solution should be treated on a sample of the material and its effect on the color noted before it is applied to the garment.

Mildew may be removed by soaking the stain in a weak acid such as lemon juice or vinegar and exposing it to the sunlight, or by wetting it with a paste of soft soap and pulverized chalk before exposing to sunlight. Where the mildew is very bad a bleaching agent, such as Javelle water, may have to be used.

Scorch from an overhot iron may be removed by soap and water, or by dampening the spot with water and exposing to sunlight for a day or longer. A slight scorch may be rubbed away with a bread crust.

All stain removers which are poisonous should be plainly labeled and kept out of the reach of children.

A trial test should be made of any reagent by placing a drop of it on an inner seam of the garment to note its effect on the color and texture of the fabric from which the stain is to be removed.

REGULAR HOURS FOR BABIES

From the hour of the arrival of the farm baby it should be taken care of by the clock. It should be fed on a regular schedule from birth. This rule rigidly adhered to, helps in the well-being of the baby and convenience for the mother as well.

I know from experience that a baby can be trained so that it will awaken from its long nap and "squeal" for dinner on the strike of the hour. Arrange from the first to start baby on a schedule that will fit in with your work and meal hours for the rest of the family. Keep your nurse until she has trained Master Baby to sleep thru the night with but one feeding (and as soon as possible have him go all night), and to adhere to the rules laid down for him in the daytime. It may take perseverance to start baby right, but do not develop a case of "nerves" if baby does cry—even awfully hard. Better have him cry it out while nurse is with you to see to him than to have him cry all during his babyhood and keep the home in a continual uproar.

If he does not submit in a reasonable time to your program, seek the advice of a competent physician, for undoubtedly there is something wrong with the feeding.

I started my first baby on a two-and-a-half hour schedule, but she would not be hungry for one feeding and would get so hungry she could not wait for the next, if I skipped one, so I changed her to a three-hour and soon to a four-hour schedule, and we "lived happily ever after," with no night feeding after a couple of months.

My next baby I started on a three-hour schedule, and he gained two pounds the first week. So we immediately changed him to a four-hour schedule. He gained steadily and has been a wonderfully good baby. In fact he does not know how to cry.

A baby should be laid down to sleep in a quiet, darkened room for a long nap after each feeding. If the breast milk is properly nourishing he will sleep the first few months almost until time for the next feeding. And if he is thus trained, to regular sleeping hours as well as feeding hours, Baby will be a joy every single minute to the busiest farm mother.

Baby will not sleep so long nor so soundly in a room where the rest of the family are continually coming and going, and where there is more or less talking. It is Baby's inalienable right to sleep in a well-ventilated room away from the rest of the family. It may make a few extra steps for the mother, but it will pay.

Very soon a baby will learn that when he is laid in his bassinet in a darkened room he is expected to go to sleep. That is a splendid lesson to teach Baby while he is still tiny. If the habit is learned very young, much time will be saved the mother later. By baby is sixteen months old now and he understands perfectly what is expected of him when he is laid in his bed and the shades pulled down. He immediately says: "Night, Mamma," and rubs his baby eyes. He sleeps twelve hours straight at night, and five or six during the day. But what a lot of energy he uses while awake!

If Baby is thus taught to live on a schedule from the very first he will be but little extra work for mother and the "affairs of the house" need not be seriously disturbed because "there is a baby in the house."—Mrs. G. H. Mumaw, Portage Co., Ohio.

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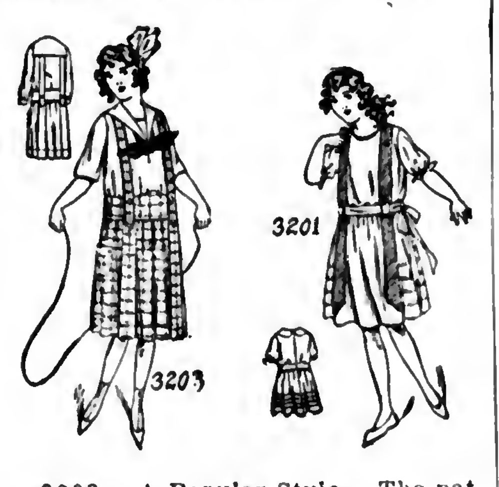
3201.—Pretty Dress for Girl.—The pattern is cut in 4 sizes: 6, 8, 10, and 12 years. A 10-year size will require 3¼ yards of 36-inch material. Shantung in a natural shade is effective with the bands embroidered in outline stitches or chenille. Linen with padded embroidery would also be attractive. Pattern, 10 cents.



3203.—A Popular Style.—The pattern is cut in 4 sizes: 6, 8, 10, and 12 years. For the blouse, one could have jean, Indian head, linen, pique, crepe, or cambric. The skirt may be of gingham, seersucker, percale, linen, serge, suiting, poplin, repp or taffeta. A 10-year size will require 2⅝ yards of 27-inch material for the blouse and 2⅝ yards for the skirt. Pattern, 10 cents.

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BALTIMORE U S A

Whispering Smith

by Frank H. Spearman

CHAPTER XVIII

New Plans

Callahan crushed the tobacco under his thumb in the palm of his right hand. "So I am sorry to add," he concluded, speaking to McCloud, "that you are now out of a job." The two men were facing each other across the table in McCloud's office. "Personally, I am not sorry to say it, either," added Callahan, slowly filling the bowl of his pipe.

McCloud said nothing to the point, as there seemed to be nothing to say until he had heard more. "I never knew before that you were left-handed," he returned evasively.

"It's a lucky thing, because it won't do for a freight-traffic man, nowadays, to let his right hand know what his left hand does," observed Callahan, feeling for a match. "I am the only left-handed man in the traffic department, but the man that handles the rebates, Jimmie Black, is cross-eyed. Bucks offered to send him to Chicago to have Bryson straighten his eyes, but Jimmie thinks it is better to have them as they are for the present, so he can look at a thing in two different ways—one for the Interstate Commerce Commission and one for himself. You haven't heard, then?" continued Callahan, returning to his riddle about McCloud's job. "Why, Lance Dunning has gone into the United States Court and got an injunction against us on the Crawling Stone Line—tied us up tighter than zero. No more construction there for a year at least. Dunning comes in for himself and for a cousin who is his ward, and three or four little ranchers have filed bills—so it's up to the lawyers for eighty percent of the gate receipts and peace. Personally, I'm glad of it. It gives you a chance to look after this operating for a year yourself. We are going to be swamped with freight traffic this year, and I want it moved thru the mountains like checkers for the next six months. You know what I mean, George."

To McCloud the news came, in spite of himself, as a blow. The results he had attained in building thru the lower valley had given him a name among the engineers of the whole line. The splendid showing of the winter construction, on which he had depended to enable him to finish the whole work within the year, was by this news brought to naught. Those of the railroad men who said he could not deliver a completed line within the year could never be answered now. And there was some slight bitterness in the reflection that the very stumbling-block to hold him back, to rob him of his chance for a reputation with men like Glover and Bucks, should be the lands of Dicksie Dunning.

He made no complaint. On the division he took hold with new energy and bent his faculties on the operating problems. At Marion's he saw Dicksie at intervals, and only to fall more hopelessly under her spell each time. She could be serious and she could be volatile and she could be something between which he could never quite make out. She could be serious with him when he was serious, and totally irresponsible the next minute with Marion. On the other hand, when McCloud attempted to be flippant, Dicksie could be confusingly grave. Once when he was bantering with her at Marion's she tried to say something about her regret that complications over the right of way should have arisen; but McCloud made light of it, and waved the matter aside as if he were a cavalier. Dicksie did not like it, but it was only that he was afraid she would realize he was a mere railroad superintendent with hopes of a record for promotion quite blasted. And as if this obstacle to a greater reputation were not enough, a wilier enemy threatened in the spring to leave only shreds and patches of what he had already earned.

The Crawling Stone River is said to embody, historically, all of the deceits known to mountain streams. Below the Box Canyon it ploughs thru a great bed of yielding silt, its own deposit between the imposing lines of bluffs that resist its wanderings from side to side of the wide valley. This fertile soil makes up the rich lands that are the envy of less fortunate regions in the Great Basin; but the Crawling Stone is not a river to give quiet title to one acre of its own making. The toil of its centuries spreads beautifully green under the June skies, and the unsuspecting settler, lulled into security by many years of the river's repose, settles on its level bench lands and lays out his long lines of possession; but the Sioux will tell you in their own talk that this man is but a tenant at will; that in another time and at another place the stranger will inherit his fields, and that the Crawling Stone always comes back for its own.

This was the peril that Glover and McCloud essayed when they ran a three-tenths grade and laid an eighty pound rail up two hundred and fifty miles of the valley. It was in local and exclusive territory a rich prize, and they brought to their undertaking not, perhaps, greater abilities than other men, but incomparably greater material resources than earlier American engineers had possessed.

Success such as theirs is cumulative: when the work is done one man stands for it, but it represents the work of a thousand men in every walk of American industry. Where the credit must lie with the engineer who achieves is in the application of these enormous reserves of industrial triumphs to the particular conditions he faces in the problem before him; in the application lies the genius called success, and this is always new. Moreover, men like Grover and McCloud were fitted for a fight with a mountain river because trained in the Western school, where poverty or resource had sharpened the wits. The building of the Crawling Stone Line came with the dawn of a new day in fairies' dreams woke into every-day use, and when enlarged calculation among men controlling hitherto unheard-of sums of money demanded the best and most permanent methods of construction to insure enduring economies in operating. Thus the constructing of the Crawling Stone Line opened in itself new chapters in Rocky Mountain railroad-building. An equipment of machinery, much of which had never before been applied to such building, had been assembled by the engineers. Steam-shovels had been sent in battalions grading-machines and dump-wagons had gone forward in trainloads, and an army of men were operating in the valley. A huge steel bridge three thousand feet long was now being thrown across the river below the Dunning ranch.

The winter had been an unusual one even in a land of winters. The season's fall of snow had not been above an average, but it had fallen in the spring and had been followed by excessively low temperatures thruout the mountains. June came again, but a strange June. The first rise of the Crawling Stone had not moved out the winter frost, and the stream lay bound from bank to bank, and for hundreds of miles, under three feet of ice. When June opened, backward and cold, there had been no spring. Heavy frosts lasting until the middle of the month gave sudden way to summer heat, and the Indians on the upper-valley reservation began moving back into the hills. Then came the rise. Creek after creek in the higher mountains, ice-bound for six months, burst without warning into flood. Soft winds struck with the sun and stripped the mountain walls of their snow. Rains set in on the desert, and far in the high northwest the Crawling Stone lifting its four-foot cap of ice like a bed of feathers began rolling it end over end down the valley. In the Box, forty feet of water struck the canyon walls and ice-floes were hurled like torpedoes against the granite spurs; the Crawling Stone was starting after its own.

When the river rose, the earlier talk of Dunning's men had been that the Crawling Stone would put an end to the railroad pretensions by washing the two hundred and fifty miles of track back to the Peace River, where it had started. This much in the beginning was easy to predict; but the railroad men had turned out in force to fight for their holdings, and while the ranchers were laughing, the river was flowing over the bench lands in the upper valley.

At the Dunning ranch the confidence of the men in their own security gave way to confusion as the river, spreading behind the ice-jams into broad lakes and bursting in torrents thru its barriers, continued to rise. Treacherous in its broad and yellow quiet, lifting its muddy head in the stillness of the night, moving unheard over broad sandy bottoms, backing noiselessly into forgotten channels, stealing thru heavy alfalfa pastures, eating a channel down a slender furrow—then, with the soil melting from the root, the plant has toppled at the head, the rivulet has grown a stream; night falls, and in the morning where yesterday smiling miles of green fields looked up to the sun rolls a mad flood of waters; this is the Crawling Stone.

CHAPTER XIX

The Crawling Stone Rise

So sudden was the onset of the river that the trained riders of the big ranch were taken completely aback, and hundreds of head of Dunning cattle were swept away before they could be removed to points of safety. Fresh alarms came with every hour of the day and night, and the telephones up and down the valley rang incessantly with appeals from neighbor to neighbor. Lance Dunning, calling out the reserves of his vocabulary, swore tremendously and directed the operations against the river. These seemed, indeed, to consist mainly of hard riding and hard language on the part of everybody. Murray Sinclair, altho he had sold his ranch on the Crawling Stone and was concentrating his holdings on the Frenchman, was everywhere in evidence. He was the first at a point of danger and the last to ride away from the slipping acres where the muddy flood undercut; but no defiance seemed to disturb the Crawling Stone, which kept alarmingly at work.

Above the alfalfa lands on the long bench north of the house the river, in changing its course many years earlier, had left a depression known as Mud Lake. It had become separated from the main channel of the Crawling Stone by a high, narrow barrier in the form of a bench deposited by the receding waters of some earlier flood, and added to by sand-storms sweeping among the willows that overspread it. Without an effective head or definite system of work the efforts of the men at the Stone Ranch were of no more consequence than if they had spent their time in waving blankets at the river. Twenty men riding in together to tell Lance Dunning that the river was washing out the tree claims above Mud Lake made no perceptible difference in the event. Dicksie, tho an inexperienced girl, saw with helpless clearness the futility of it all. The alarms and the continual failures of the army of able-bodied men directed by Sinclair and her cousin wore on her spirit. The river rose until each succeeding inch became a menace to the life and property of the ranch, and in the midst of it came the word that the river was cutting into the willows and heading for Mud Lake. All knew what that meant. If the Crawling Stone should take its old channel, not alone were the two square miles of alfalfa doomed; it would sweep away every vestige of the long staks below the corrals, take the barns, and lap the slope in front of the ranch-house itself.

Terror seized Dicksie. She telephoned in her distress for Marion, begging her to come up before they should all be swept away; and Marion, turning the shop over to Katie Dancing, got into the ranch-wagon that Dicksie had sent and started for the Crawing Stone. The confusion along the river road as the wagon

approached the ranch showed Marion the seriousness of the situation. Settlers driven from their homes in the upper valley formed almost a procession of misery-stricken people, making their way on horseback, on foot, and in wagons towards Medicine Bend. With them they were bringing all they had saved from the flood—the little bunch of cows, the wagonloads of hogs, the household effects, the ponies—as if war or pestilence had struck the valley.

At noon Marion arrived. The ranch-house was deserted, and the men were all at the river. Puss stuck her head out of the kitchen window, and Dicksie ran out and threw herself into Marion's arms. Late news from the front had been the worst; the cutting above Mud Lake had weakened the last barrier that held off the river, and every available man was fighting the current at that point.

Marion heard it all while eating a luncheon. Dicksie, beset with anxiety, could not stay in the house. The man that had driven Marion over, saddled horses in the afternoon and the two women rode up above Mud Lake, now become thru rainfall and seepage from the river a long, shallow lagoon. For an hour they watched the shovelling and carrying of sand-bags, and rode toward the river to the very edge of the disappearing willows, where the bank was melting away before the undercut of the resistless current. They rode away with a common feeling—a conviction that the fight was a losing one, and that another day would see the ruin complete.

"Dicksie," exclaimed Marion—they were riding to the house as she spoke—"I'll tell you what we can do!" She hesitated a moment. "I will tell you what we can do! Are you plucky?"

Dicksie looked at Marion pathetically.

"If you are plucky enough to do it, we can keep the river off yet. I have an idea. I will go, but you must come along."

"Marion, what do you mean? Don't you think I would go anywhere to save the ranch? I should like to know where you dare go in this country that I dare not!"

"Then ride with me over to the railroad camp by the new bridge. We will ask Mr. McCloud to bring some of his men over. He can stop the river; he knows how."

Dicksie caught her breath. "Oh, Marion! that would do no good, even if I could do it. Why, the railroad has been all swept away in the lower valley."

"How do you know?"

"So every one says."

"Who is every one?"

"Cousin Lance, Mr. Sinclair—all the men. I heard that a week ago."

"Dicksie, don't believe it. You don't know these railroad men. They understand this kind of thing; cattlemen, you know, don't. If you will go with men we can get help. I feel just as sure that those men can control the river as I do that I am looking at you—that is, if anybody can. The question is, do you want to make the effort?

They talked until they left the horses and entered the house. When they sat down, Dicksie put her hands to her face. "Oh, I wish you had said nothing about it! How can I go to him and ask for help now—after Cousin Lance has gone into court about the line and everything? And of course my name is in all."

"Dicksie, don't raise spectres that have nothing to do with the case. If we go to him and ask him for help he will give it to us if he can; if he can't, what harm is done? He has been up and down the river for three weeks, and he has an army of men camped over by the bridge. I know that, because Mr. Smith rode in from there a few days ago."

"What, Whispering Smith? Oh, if he is there I would not go for worlds!"

"Pray, why not?"

"Why, he is such an awful man!"

"That is absurd, Dicksie."

Dicksie looked grave. "Marion, no man in this part of the country has a good word to say for Whispering Smith."

"Perhaps you have forgotten, Dicksie, that you live in a very rough part of the country," returned Marion coolly. "No man that he has ever hunted down would have anything pleasant to say about him; nor would the friends of such a man be likely to say a good word of him. There are many on the range, Dicksie, that have no respect for life or law or anything else, and they naturally hate a man like Whispering

"But, Marion, he killed——"

"I know. He killed a man named Williams a few years ago, while you were at school—one of the worst men that ever infested this country. Williams Cache is named after that man; he made the most beautiful spot in all these mountains a nest of thieves and murderers. But did you know that Williams shot down Gordon Smith's only brother, a trainmaster, in cold blood in front of the Wickiup at Medicine Bend? No, you never heard that in this part of the country, did you? They had a cowthief for sheriff then, and no officer in Medicine Bend would go after the murderer. He rode in and out of town as if he owned it, and no one dared say a word, and, mind you, Gordon Smith's brother had never seen the man in his life until he walked up and shot him dead. Oh, this was a peaceful country a few years ago! Gordon Smith was right-of-way man in the mountains then. He buried his brother, and asked the officers what they were going to do about getting the murderer. They laughed at him. He made no protest, except to ask for a deputy United States marshal's commission. When he got it he started for Williams Cache after Williams in a buckboard—think of it, Dicksie—and didn't they laugh at him! He did not even know the trails, and imagine riding two hundred miles in a buckboard to arrest a man in the mountains! He was gone six weeks, and came back with William's body strapped to the buckboard behind him. He never told the story; all he said when he handed in his commission and went back to his work was that the man was killed in a fair fight. Hate him! No wonder they hate him—the Williams Cache gang and all their friends on the range! Your cousin thinks it policy to placate that element, hoping that they won't steal your cattle if you are friendly with them. I know nothing about that, but I do know something about Whispering Smith. It will be a bad day for Williams Cache when they start him up again. But what has that to do with your trouble? He will not eat you up if you go to the camp, Dicksie. You are just raising bogies."

(Continued Next Week.)

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Markets

PHILADELPHIA PRODUCE

July 12, 1980

With the abundant supplies of nearly all kinds of vegetables coming forward from nearby N. J. and nearby Penna., Philadelphia does not need to look to more distant points for its supplies.

Altho a few potatoes are still coming from the Eastern Shore of Va. and Norfolk sections, the N. J. crop has started to move and within the course of a few days will be here in sufficient quantities to supply the fall market requirements. The Eastern Shore potatoes sold this morning at $10@11.50 bbl. for No. 1s, and culls at $4@6 bbl. The Norfolks sold from $10@11 bbl. for No. 1s, and culls at $3.50@4.50. N. J. stock sold around $2@2.25 ⅝ basket for No. 1s, with No. 2s at $1@1.50. Within a few days it is believed that lower prices will be prevailing.

The asparagus season is practically at an end, the few remaining supplies being rather poor and prices are ranging from 35c bunch down as to quality. Green beans have been very plentiful and sold very low during the past few days, but this morning, under light supplies, the market ruled from 25@60c ⅝ basket.

N. J. cabbage sold today at $2@2.50 crate and 50@70c ⅝ basket, while the Penna. cabbage sold at $1.50@2.50 bbl. Beets are in plentiful supply at 2@4c bunch. Carrots are plentiful, most sales ranging from 3@5c bunch. Penna. cauliflower brings $5@6 bbl. when fancy and large headed, but there is a little poor, small headed stock which sells as low as $2 bbl. N. J. celery is meeting a rather slow market at 75c@$1.25 bunch. N. J. corn appeared last week and is now selling around $2@2.50 ⅝ basket, with now and then some at $2.75 basket.

Del. cucumbers made their appearance and are selling around $1.60@2 hamper. N. J. cucumbers are selling around $1.75@2.25 ⅝ basket.

The first car of Norfolk egg plants of the season was here this morning and sold at $7@8 64-qt. crate. Lettuce is in excessive supply and selling very low, N. Y. state selling at 40c@$1 box, while the N. J., which is now getting poor, only brings 50@75c box. Onions are very hard to move at any price, the best N. J. selling this morning at 40@60c ⅝ basket, while some very poor sold as low as 20@35c basket.

per. A few N. Y. state peas sold at $2.25 bushel. The season on N. J. peas is winding up strong at $1@1.50 ⅝ basket. The season on southern peppers is also over, as the N. J. crop has started at $1.60@1.75 ⅝ basket. A little rhubarb is meeting a slow demand at 2@4c bunch. Radishes are also being neglected at 1@2c bunch. Romaine, like lettuce, is in over-supply and selling slowly at 25@75c box.

Scallions are also being neglected, like onions, and selling slowly at 1@1½c bunch. Squash, plentiful and declining. White squash is selling at 50@65c basket and the green Italian squash at 50@$1 basket. N. J. tomatoes, which started in rather slowly last week are now beginning to get more plentiful. Early this morning best N. J. tomatoes were selling around $4@4.50 ⅝ basket, but the market declined during the day and at this time the market is ruling rather easy at $275@3.75 to $4 ⅝ basket, with prospects of prices gradually seeking lower levels as the supplies continue to increase. N. J. and Penna. turnips are dull at 50@60c basket for the whites and 50@75c basket for the yellows. A little water cress is selling at 3c bunch.

Fruits.—With the exception of peaches, cantaloupes and watermelons, the market requirements of all kinds of fruits are being supplied by our nearby growers. The best peaches at this time are coming from Georgia, which are selling up to $3.50@4 crate, with poor lower. The N. J. peaches are gradually coming forward and showing better each day and will be soon supplying the market's requirements. The N. J. crop of apples has started and are selling from $1.25@2 ⅝ basket, with No 2s and windfalls at 25c@$1 basket. Blackberreis are selling from 20@28c qt. as to condition. Huckleberries continue in light supply and firm at 25@28c per qt. Red raspberries show a wide range in condition, best selling at 12@15c pint, with poor lower. Black raspberries sell around 10@13c pint. Currants are in good demand at 15@18c qt. Cherries are winding up and selling at higher prices, best bringing 20@25c qt., while by the lb. prices range from 15@18c. **Sweet cherries** are scarce at $1@2 4-qt. basket.

Poultry.—While prices at the present writing are showing very little change from those prevailing a week ago, the market has been ruling rather weak and at this writing values are barely being sustained. Large heavy fowl are selling at 39@41c, and light to medium at 35@37c. Leghorn fowls are only bringing 34@36c lb. Old roosters remain steady at 25@26c; broiling chickens have declined about 5c lb., the best now selling at 60@65c lb., with poor at 50@55c, while the Leghorn broilers only bring 45@53c lb. Old ducks are unchanged at 28@30c lb., but spring ducks are lower at 30@35c lb.

Eggs.—As is usual during the hot summer months, there is a wide range in the quality and condition of eggs and consequently there is a wide range in prices. Strictly fancy eggs are firmer and higher, but the poorer grades are hard to move at about former prices. At this writing Penna. and other nearby current receipts are selling at 48c doz., with nearby firsts at 50c doz., while the ordinary to fair eggs are moving out slowly at 43@47c doz. Western firsts are quotable at 46@48c doz., and western extra first at 50c doz., while the western seconds and poorer show the low price and wide range of 30@43c doz. as to quality and amount of loss shown.

LANCASTER PRODUCE

—July 10, 1920

With old chickens selling for as high as $2.75 each and spring chickens no larger than a squab bringing $1.50 and $1.60, housewives were today turned to the butcher shops. The first offerings of raspberries were quoted at 30@35c per box, and scrawny little apples brought 50@60c per half peck. The quotations:

Butter and Eggs.—Creamery butter, 70c per lb.; country butter, 68@70c per lb.; fresh eggs, 48@50c per doz.; duck eggs, 55c per doz.; goose eggs, 6@7c each.

Poultry.—Dressed old chickens, $2.50@2.75 each; dressed young chickens, $1.50@1.60 each.

Vegetables.—Rhubarb, 6c bunch; new beans, 40c hf. pk.; new peas, 30@40c hf. pk.; asparagus, 10c bunch; beets, 5@8c bunch; cauliflower, 15@20c head; cabbage, 15@20c head; sweet potatoes, 50c hf. pk.; new potatoes, 50@60c hf. pk.; lettuce, 15@25c head; spinach, 25@30c hf. pk.

Fruit.—Cherries, 20c box; raspberries, 30@35c box; cantaloupes, 15@25c each; watermelons, 60c@$1 each.

BALTIMORE PRODUCE

—July 10, 1920

Butter.—Creamery, Western Separator, extras, 60@61c; do., firsts, 58@59c; Western prints, ½-pound, extras, 61@62c; do., firsts, 58@59c; do., 1 pound, 61@62c; do., firsts, 58@60c; nearby creamery, extras, 48@50c; do., firsts, 46@47c; dairy prints, Maryland, Pennsylvania and Virginia, extras, 43@44c; do., firsts, 42@43c; store packed, firsts, 43c.

Eggs.—Western Maryland, Pennsylvania and nearby, firsts, 43c; Eastern Shore, Maryland and Virginia, firsts, 43c; Western (Ohio), firsts, 43c; West Virginia, firsts, 42c; Southern (North Carolina), firsts, 41c.

Live Poultry.—Chickens, spring, under 1¼ pounds, pound, 45@50c; do., 1¼@1½ pounds, pound, 52@55c; do., 1¾ and 2 pounds, pound, 55@58c; do., old roosters, pound, 20c; do., old hens, pound, over 4 pounds, 36c; do., small, pound, 35c; do., White Leghorn hens, pound, 36c; do., young White Leghorns, 1½ pounds, 50c; do., under 1½ pounds, 40@45c. Ducks, Muscovy and Mongrel, old, 28@30c; do., White Pekins, pound, young, 40c; do., spring, pound, 4 pounds and over, 40c; do., smaller, poor, 30@35c. Pigeons, pair, old, 45c; do., young, 45c.

NEW YORK PRODUCE

—July 10, 1920

Butter.—Steady; receipts, 8779 tubs; creamery, higher than extras, 58½@59c; extra (92 score), 58c; first (88 to 91 score), 53@57½c; state dairy finest, tubs, 56½@57½c; do, good to prime, 53@56c; packing stock, current make, No. 1, 42@42½c.

Eggs.—Firm; receipts, 20,919 cases; fresh gathered extra firsts, 49@51c; do, firsts, 44@48c; state, Pennsylvania and nearby western hennery whites, first to extra, 55@63c; do, brown, extras, 54@57c; do, gathered brown and mixed colors, first to extra, 44@53½c.

Cheese.—Irregular; receipts, 4171 boxes; state, whole-milk flats, current make, white and colored, special, 27½@28½c.; do, average run, 26@27c; state, whole-milk twins, current make, special, 27¼@27¾c.

Poultry.—Live and dressed, steady and unchanged.

Vegetables.—Asparagus, dozen green, $1.50@4.00; white, $1@3. Potatoes, L. I., bbl., $11.50@12.50; Jy., 165 lbs., $12@12.50; do, No. 2, $6@7. Beans, Jy., wax, 35c@$1; Jy., green, 40c@$1; Jy., Ital., 50c@$1; Jy., Fava, 60c@$1; L. I., bag, 35@75c. Beets, 100 bunches, $4@6. Carrots, nearby, $3@4. Celery, state, bch., 25c@$1; Jy., bch., 20@85c. Cucumbers, Jersey, basket, $1.50@3.50; Jy., doz., 75c@$1; L. I., doz., 75c@$1.25. Cabbage, L. I., bbl., $2@2.50; Jy., bbl., $2@2.50. Kale, nearby, 50c. Lettuce, State, crate, 50c@$1; nearby, bbl., 75c@$1.50. Onions, Jy., wh., $1@1.50; yel., basket, $1@1.25; nearby, 100 bunches, $2@3. Peas, State, basket, $1@1.75; State, bag, $1@1.50; L. I., bag, 50c@$1.25; Jy., basket, 50c@$1.25. Peppers, Jy., basket, $1.75@2. Parsley 100 bunches, $3@4. Radishes, nearby, 100 bunches, $1@3. Rhubarb, $2@5 er 100 bunches. Scallions, nearby, $2@5 per 100 bunches. Scallions, nearby, basket, 25@75c; State basket, 50c@$1. Turnips, white, new, $1@2. Rutabaga, new, bbl., $2@3; bag, $1.50@2.50. Tomatoes, Jy., box, $2.50@3.50.

Fruit.—Apples, S'n, bsk., $2@5; Jy., bsk., $2@3.50; poor, 75c@$2. Peaches, crate, Hilley, $1@4; Carman, 75c@$3; Strawberries, W'n N. Y., 30@45c; Up. Riv., qt., 20@40c. Huckleberries, Pa., qt., 25@38c; Jy., qt., 25@38c. Blackberries, Jy., qt., 25@30c; Del., qt., 20@25c. Raspberries, Jy., pt., 12@17c; Black Cap, 12@17c. Gooseberries, qt., 17@20c; small, qt., 15@16c. Cherries, sour, qt., 12@16c. Currants, qt., 10@15c.

YORK PRODUCE MARKETS

—July 10, 1920

The markets have continued to advance in the amount of produce delivered during the past week. The greatest increases were made in potatoes and cabbage. Yet the prices are holding well up. Large quantities of currants and cherries were sold; also the first apples of the season were seen—yellow transparent. There was quite a run of green beans and the price dropped down to 25c hf. pk.

Eggs.—45@46c doz.

Butter.—Country, 60@65c lb; separator, 65@75c lb.; milk, 12c qt.

Poultry.—Hens, 30@34c lb.; dressed, $1@2.50 each.

Vegetables.—Potatoes, 50@60c hf. pk.; cabbage, 10@15c hd.; lettuce, 3@5c hd; beets, 5c bch.; radishes, 5c bch.; onions, 5c bch.; asparagus, 10@12c bch.; peas, 15@25c ¼ pk.; beans, 25@40c hf. pk.; ham, sliced, 40@85c lb.; whole, 45@50c lb.

Fruit.—Apples, new, 20c box; strawberries, 15@25c box; cherries, 8@15c box; currants, 12@18c box; raspberries, 18@22c box.

Retail Grain Market.—Wheat, $3; Corn, $2.25; oats, $1.50; rye, $2.00; bran, $3.50 cwt.; middlings, $3.75 cwt.

Wholesale Grain Market.—Wheat, $2.60; corn, $1.80; rye, $1.78; oats, $1.20; bran, $65 per ton; middlings, $75 per ton.

PHILADELPHIA LIVESTOCK

—July 10, 1920

Receipts for the week ending July 10, 1920, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Totals for week	1,170	4,812	7,883
Previous week	2,469	7,644	9,391

Calves.—Receipts of calves were 1,974 head against 2,428 head previous week.

Beef Cattle.—Demand was fair for choice steers and values were firmly held, but medium and poor stock was quiet. Cows were steadily held, with demand fair. Veal of fine quality ruled steady under moderate supplies and a fair demand. Quotations: Steers good to choice, $15@17; fair to good, $13.50@15; common to fair, $12@13.50; cows, dairy, good to choice 8½@10c; do, fair to good, 7@8½c; bulls, 7½@10½c; calves, extra to choice, $17@17.50; fair to good, $14@18; do, common, $11@13; Tennessee, $12@14; other southern, $8@10.

Sheep and Lambs.—There was a fair demand for sheep and the market ruled steady under moderate offering. Lamb of fine quality ruled firm, but medium and poor stock was quiet. Quotations: Sheared sheep, wethers, extra, $9.50@10; do, good to choice, $7.50@8.50; do. medium, $6@7; do, common, $2@3.50; ewes, heavy, fat, $6@6.50; lambs, spring, choice, $17@17.50; medium, $12@14; common, $8@10.

Hogs.—The market ruled firm under light offerings and a fair demand, and prices were slightly higher. Western advices were stronger. Quotations: Best western, $19; good, nearby, $17@17.50.

City Dressed Stock.—Steers, heifers and cows were firm under light offerings and a fair demand. Veal and lamb of desirable quality ruled steady under moderate supplies and a fair inquiry. Hogs were firmly held. Quotations: Steers, 22@28c; heifers, 18@26c; cows, choice, 20@23c; cows, light, 12@20c; calves, city dressed, choice, 27@29c; calves, country dressed, 24@26c; lambs, spring, choice, 33@35c; sheep, 14@23c; hogs, 24c.

LIVESTOCK MARKETS

—July 10, 1920

CHICAGO

Cattle.—Receipts, 1500; curtailed week ago; good to best yearlings, light and handy weight steers, 50@75c higher; heavies, largely 35@50c higher; others, uneven, steady to higher; better grades, fat cows and heifers, 50@75c higher; canners and cutters and bulls, mostly steady; veal calves, $1.50@1.75 higher; lower grades of stock, steady; desirable kinds higher.

Hogs.—Receipts, 5000; steady to 15c higher; best light and light butcher gained most; top, $16.40; bulk light and light butchers, $15.90@16.30; bulk, 250 pounds and over, $13.90@15.90; pigs steady; bulk desirable kinds, $13@13.75.

Sheep.—Receipts, 7000; over one-half run direct; 12 cars of choice Idaho lambs, $16.40; one car wethers, $8.50; compared with week ago, better grades of fat lambs, $1@1.50 higher; others up $2@3; yearlings and wethers, mostly 75c@$1 higher; ewes, $1.50@2 higher; feeding and breeding classes mostly 50c@$1 higher.

LANCASTER

July 12, 1920

Cattle.—Receipts, 1053 head; market fairly active; prices firm; choice to prime steers, $15@16; good to choice steers, $14@15; medium to good steers, $12.50@14; common to medium steers, $11@12.50; fair to good bulls, $11@12; medium, $10@11; common, $8@10; choice to prime heifers, $11.50@12.50; good to choice, $10.50@11.50; medium, $10@10.50; common, $9.50@10; good to choice cows, $10@11; medium, $9.50@10; common, $8.50@9.50; canners and cutters, $4@5; stock bulls, $8@9; good to choice calves, $16.50@17.50; medium $15.50@16.50; common, $14@15.50.

Hogs.—Receipts, 171 head; market quiet; prices steady; best grades, $16.50@17; lightweights, $16@16.50; roughs, $11@12.

EAST BUFFALO

July 12, 1920

Cattle.—Receipts, 3000; good steady to 15c higher; shipping steers, $16@16.75; butchers, $9@15.50; yearlings, $15@16.50; heifers, $7@13; cows, $3@10.50; bulls, $6@10; stockers and feeders, $6@10; fresh cows and springers, $60@150.

Calves.—Receipts, 2000; 50c higher; $6@17.50.

Hogs.—Receipts, 6400; good steady to 25c higher; light, 15@25c lower; heavy, $16@16.75; mixed, $17@17.25; yorkers, $17.25@17.40; few, $17.50; light yorkers, $16@17; pigs, $15.75@16; roughs, $12.75@13; stags, $8@10.

Sheep and Lambs.—Receipts, 1400; lambs, 50c higher; lambs, $8@17; yearlings, $7@13; few, $15; wethers, $6.50@9; ewes, $3@8; mixed sheep, $5@8.50.

NEW YORK

Cattle.—Receipts, 730; no trading.

Calves.—Receipts, 590; steady to firm; veals, $14@18.50; culls, $12; Indiana and Ohio calves, $10@15.50.

Sheep and Lambs.—Receipts, 2025; irregular; sheep (ewes), $6@9.75; culls, $4@5; lambs, $14@17.75.

Hogs.—Receipts, 1725; steady at $16.50@17.25; pigs, $16; roughs, $13.60.

PITTSBURGH

Cattle.—Slow; supply light; prime, $15@15.25.

Sheep.—Slow; supply light; prime wethers, $8.50@9; culls and common, $2@4; lambs, $8@16.

Veal Calves.—$15@16.

Hogs.—Higher; supply, 12 double decks; prime heavies, $16@16.75; mediums and heavy yorkers, $17.75@17.85; light yorkers, $16.50@16.75; pigs, $15.75@16; roughs, $11@13.50.

PHILADELPHIA HAY AND GRAIN

—July 10, 1920

Bailed Hay and Straw.—Receipts, 132 tons of hay and 5 cars of straw; quiet but steady. Timothy hay, No. 1, none here; No. 2, $42@44; No. 3, $39@40; sample, $33@37; no grade, $28@32; clover mixed hay, light mixed, $42@43; No. 1 mixed, $40@41; straw, No. 1 straight rye, $17@17.50; No. 2 do, $16.50; No. 1 wheat straw, $14.50@15; No. 2 do, $13.50@14; No. 1 oat straw, $14.50@15; No. 2, $13.50@14.

Bran in light request and showed little change. Car lots including sacks, soft winter bran, western, in 100-lb. sacks, per ton, $59.50@60; spring bran, in 100-lb. sacks, per ton, $58@59.

Corn.—No. 2 Yellow, $1.85@1.90.

Wheat.—No. 1 red winter, $2.88@2.93; No. 2 do, $2.90@2.95; No. 3 do, $287@2.92; No. 4 do, $2.83@2.88; No. 5 do, $2.79@2.84.

Oats.—No. 1 White, $1.30@1.31; No. 2 do, $1.29@1.30; No 3 do, $1.28@1.29; No. 4 do, $1.26@1.27.

NEW YORK HAY AND GRAIN

—July 10, 1920

Feed.—The market for mill feed was quiet and barely steady. Spot goods were in less demand and buyers were little interested in mill offers and seemed to have feed of one kind or another on hand with which to supply immediate needs at least.

Quotations: City feed, bran, $62; middlings, $84, in 100-pound sacks; red dog, $76, nominal, in 100-pound sacks; Western spring bran, $56; standard middlings, $62; flour middlings, $66; red dog, $75; all in 100-pound sacks, 30-day shipment. Oat feed, $42; rye middlings, $58; white hominy feed, $75; all in 100-pound sacks. Cottonseed oil meal, $72; linseed oil meal, $66, in 100-pound sacks.

Hay and Straw.—Market continues dull with tendency downward and new invoices showing further increase. Quotations extreme for stations other than 33d street.

Hay.—Large Bales—Timothy.—No. 1, $48; No. 2, $44@47; No. , $39@42; Shipping, $36@38; No grade, $24@33. Clover, Mixed—Fancy, $45@47; No. 1, $40@43; No. 2, $35@38.

Straw.—Large Bales.—No. 1 rye, $20; No. 1 oat, $20; No. 1 wheat,

Wheat.—No. 2, red, $2.95. **Corn.**—No. 2 Yellow, $1.98¼. **Oats.**—All Whites, $1.33@1.35; ord. wh. cl., $1.34; fancy, wh. cl., $1.38. **Rye.**—$2.33½. **Barley.**— Feeding, $1.55@1.60.

PHILADELPHIA DAIRY MARKET

—July 10, 1920

Butter.—Receipts, 5401 tubs. As usual on Saturday, there was little disposition to trade in a wholesale way, but prices were firmly maintained on fine goods. We quote as follows: Fresh solid-packed creamery, high-scoring goods, 60½@62½c, the latter for jobbing sales: extras, 59½c; do, extra firsts, 57½@58½c; firsts, 51@55c; seconds, 45@50c; sweet creamery, choice to fancy, 61½@63½; fair to good, 51@60½c; packed, as to quality, 44@46c; packing stock, 38@41c; fancy brands of nearby prints were jobbing at 68@70c; good to choice, 60@67c; fair, 57@59c.

Cheese was quiet but steady. New York, whoel milk, current make, fancy flats, 27½@28c; common to fair, 24@27c; Longhorns, 28@28½c; single Daisies, 28@29c; jobbing sales of fancy goods, 29@30c.

THE MILK MARKET

July 12, 1920

Weather conditions have been favorable the past week and demand very active. Surplus much lighter than for some time and rapidly diminishing. July rate in 200-mile zone for 3 percent milk is $2.95 per 100 lbs.; 3.6 percent milk is $3.19, and 4 percent milk, $3.35.

Receipts of milk and cream in 40-quart cans for the week ending July 10, 1920, were as follows:

Railroad	Milk	Cream
Erie	38,548	5,010
Susquehanna	7,823	195
West Shore	13,125	2,672
Lackawanna	53,912	2,715
N. Y. Central (long haul)	186,357	5,253
Ontario	42,110	2,006
Lehigh Valley	60,128	2,823
New Haven	6,510	70
Pennsylvania	11,224	516
Other Sources	5,500	250
otals	425,237	21,310
Same week last year	407,192	20,530

INTERSTATE MILK PRICES

—July 10, 1920

The basic price for 3 percent milk within 10 miles of Philadelphia is $3.28 per 100 lbs. and 1 cent per 100 less for each 10 miles distant. Four cents per 100 lbs. is paid for each one-tenth of 1 percent fat above 3 percent. These are prices for the basic quantity or less. The price for amount exceeding of basic quantity is on the basis of 6.6c for 3 percent milk.

TOBACCO MARKET

July 12, 1920

Tobacco market valuations were unchanged during the week. Transactions were few and sales were of course almost wholly by dealers who now hold practically the entire available residue of the 1919 product. It should be remembered, however, that recent advances still hold good and that with a continuation of present conditions the new crop should command an advanced price as compared with price received by growers for last year's product. It should be noted, therefore, that tempting offers which may be made at any time and which in all probability will be on a basis of last crop prices should be uniformly refused. The old lesson of the unprofitable, often even sad experience of those who sold early, should be studied anew that a similar mistake may not be made at this time of unusual expenses and generally excessive outlay.

The 1920 tobacco crop is now under way and it is conceded that the early outlook is unusually favorable. Delayed for a time by an unusually late spring, characterized by cloudy weather and cold rains, the unfavorable panorama has completely disappeared, giving place to a condition of warmth and growth almost unprecedented. Accordingly, tobacco growers are greatly encouraged and are throwing intensive energy into the growth of what should be one of the most valuable crops in the history of the industry. Already some fields have grown to considerable size, and practically all are large enough to be seen at a distance. Insects have been conspicuously absent and cultivation has proceded practically uninterrupted by excessive rain. Topping will begin in about ten days. The bright outlook here is no better than that which exists in other tobacco growing localities, practically all of which report a promising outlook after a gloomy spring.

LIVE STOCK DECREASING

A falling off in the number of cattle and hogs in the United States occurred during the first four months of this year, as compared with the like period last year.

In the case of hogs, the births during January, February, March, and April were about 10 per cent. fewer than in the same months last year. The marketings have fallen off about 15 per cent.; the farm slaughter was about the same in both seasons; but the deaths on farms this year are over 40 per cent heavier than last year to May 1. Taking into consideration both the births and the deaths (from all causes), it appears that there has been a relative reduction of about 5 per cent. during the first four months of this year as compared with the trend during the first four months of last year.

The births of calves from January 1 to May 1 were about 22 per cent. fewer this year than last year. The net disposition of cattle by marketings, farm slaughter, and deaths was about 9 per cent. greater than last year; it appears that there has been a reative reduction of about 6 per cent. in total number of cattle as compared with last year during the four months January 1 to May 1.

PENNSYLVANIA FERTILIZER REPORT

A report of the inspection of fertilizers for the Fall season of 1919 has been prepared by the Bureau of Chemistry, Pennsylvania Department of Agriculture, and will soon be ready for distribution. Of the 827 samples of fertilizers obtained during this period there were 25 per cent. of of them which were found to be deficient in one or more elements of the plant foods, nitrogen, phosphoric acid or potash. While most of these deficiencies were only slight variations from the guarantees there were eleven cases which contained so much less plant food than guaranteed that prosecutions were ordered against the parties responsible for the sale of these brands. The result of this work shows much room for improvement in having printed on sacks the correct guarantees. In addition to the deficiencies which were in such large proportion, thereby indicating a serious loss to the farmers, the most noticeable feature of the work was an increase in the number of brands supplying potash as well as an increase in the percentage or the amount of potash supplied by these brands. During the war period the few brands which contained potash showed only guarantees of from ¼ to 2 per cent., while those brands examined recently contained as high as 6 per cent. and in the case of Complete Fertilizers averaged 2.11 per cent. of potash. There was a noticeable drop in the average selling prices compared with previous inspection seasons, except in the case of Ground Bones, the average for each group of fertilizers being as follows:

Complete Fertilizers, $34.91 a ton.

Nitrogen and Phosphoric Acid Fertilizers, $31.65 a ton.

Ground Bone Fertilizers, $55.85 a ton.

Acidulated Phosphate Fertilizers, $26.56 a ton.

Rock and Potash Fertilizers, $32.00 a ton.

ABANDONED ACREAGE OF WHEAT

It appeared early this spring that considerable damage had been done to the wheat on low ground by the heavy coating of ice which smothered the grain, but according to reports coming to the Pennsylvania Department of Agriculture this was largely a false alarm and the damage is not as great as was first thought.

Nature works wonders under favorable growing conditions. While the grain looked dead on these low grounds, yet there was still some vitality there and when the rain and sunshine appeared they put new life into the plants and caused them to stool out and in a measure make up for loss.

It is entirely probable, however, that the wheat on these low grounds where damage was done will not yield as largely as the higher grounds. Reports from every part of the State show that approximately only 26,630 acres, or less than 2 per cent. of the area, was abandoned. This leaves 1,566,140 acres for harvest.

The greatest damage appears to have been done in Philadelphia, Northampton, Bucks, Delaware and Fayette counties.

Late seeding and damage by the Hessian fly are partly responsible for the abandoned acres.

There was practically no damage this year by "heaving" during March as frequently occurs.

CROP ESTIMATES FOR SEVERAL COUNTRIES

A dispatch received by the Bureau of Crop Estimates, United States Department of Agriculture, June 2, 1920, from the International Institute of Agriculture, Rome, Italy, gives the 1920 production of wheat in British India as 364,900,000 bushels, or 130.1 per cent. of the 1919 production, and 103.4 per cent. of a five-year average, 1914-1918.

The 1920 production of corn in Argentina is given as 258,692,000 bushels, or 115.4 per cent. of the 1919 production, and 132.1 per cent. of a five-year average, 1914-1918.

The condition of cereals on May 1st was average in Great Britain, Ireland, France, Hungary, Portugal, Egypt, Morocco. There was drought in South Italy and Algeria.

COST FACTORS IN MILK PROUUCTION

What does it cost to keep a cow for a year or to produce 100 pounds of market milk? To answer this question in terms of labor, feed, and other cost factors the Dairy Division of the United States Department of Agriculture has been collecting for several years facts and figures from various sections of the country. The results from northwestern Indiana, typical of many farms supplying the Chicago market, are now available in bulletin form. In collecting the information the department worked in co-operation with Purdue University.

To give permanent value to the figures, the investigators determined the cost of milk production chiefly in terms of feed, labor, and other important factors. Thus by applying current values to any of the items a dairyman, or anyone else interested, may compare his present costs with those published by the department. Practical farms owned or handled by resident farmers were used in the investigation.

Among the outstanding results are the following:

The unit requirements for keeping a cow one year were: Concentrates, 102 tons; dry roughage, 3.64 tons; hauling and grinding concentrates, $1.53; bedding, 0.36 tons; pasture, 1.36 acres; human labor, 164.5 hours; horse labor, 16.2 hours; overhead and other costs, $27.11. Credits other than milk: Manure, 6.8 tons; calves, 0.87 of one calf.

Feed and pasture comprised 57.6 per cent. of the total cost of production; labor, 10.5 per cent.; overhead and other cost, 22.9 per cent. The total cost was offset 22.3 per cent. by calves and manure. A different percentage relationship would exist, however, if present prices for the various items were used.

The extent to which cows of high production save labor was shown clearly by comparative figures for the twenty-five herds studied. The owner of one herd of cows averaging 9200 pounds of milk annually had to feed and milk only nine cows to obtain the same quantity of milk as that given by twelve average cows in other herds.

The results mentioned, together with other details, are given more fully in the new publication department Bulletin 858, "Requirements and Cost of Producing Milk in Northwestern Indiana."

PENNSYLANIA FAIRS IN 1920

Town	County	Date
Apollo	Armstrong	Aug. 4-7
Pulaski	Lawrence	Aug. 17-19
Erie	Erie	Aug. 23-28
Waynesburg	Greene	Aug. 24-27
Punxsutawney	Jefferson	Aug. 24-27
Kutztown	Berks	Aug. 24-28
Williams Grove Picnic	Williams Grove	Aug. 30-S. 3
Towanda	Bradford	Aug. 31-S. 3
Donegal Twp.	Butler	Aug. 31-S. 3
Exposition Park	Crawford	Aug. 31-S. 3
Lebanon	Lebanon	Aug. 31-S. 3
Arden	Washington	Aug. 31-S. 3
West Chester	Chester	Sept. 1-4
Stroudsburg	Monroe	Sept. 6-10
Byberry, Phila.	Philadelphia	Sept. 6-11
Montrose	Susquehanna	Sept. 7-9
Troy	Bradford	Sept. 7-10
Butler	Butler	Sept. 7-10
Wattsburg	Erie	Sept. 7-10
Indiana	Indiana	Sept. 7-10
Port Royal	Juniata	Sept. 7-10
Westfield Twp.	Tioga	Sept. 7-10
Warren	Warren	Sept. 7-10
Clarks Summit	Lackawanna	Sept. 7-11
Athens	Bradford	Sept. 13-18
Harford	Susquehanna	Sept. 14-16
West Alexander	Washington	Sept. 14-18
N. Washington	Butler	Sept. 14-17
Carrolltown	Cambria	Sept. 14-17
Titusville	Crawford	Sept. 14-17
Brookville	Jefferson	Sept. 14-17
Newport	Perry	Sept. 14-17
Tunkhannock	Wyoming	Sept. 14-17
Reading	Berks	Sept. 14-18
Nazareth	Northampton	Sept. 14-18
Allentown	Lehigh	Sept. 20-25
St. Marys	Elk	Sept. 21-23
Altoona	Blair	Sept. 21-24
Clarion	Clarion	Sept. 21-24
Dallas	Luzerne	Sept. 21-24
Meyersdale	Somerset	Sept. 21-24
Hanover	York	Sept. 21-24
Junction Park	Beaver	Sept. 22-25
Stoneboro	Mercer	Sept. 27-30
Burgettstown	Washington	Sept. 28-30
Dayton	Armstrong	Sept. 28-Oct. 1
Bedford	Bedford	Sept. 28-Oct. 1
Clearfield	Clearfield	Sept. 28-Oct. 1
Somerset	Somerset	Sept. 28-Oct. 1
Forksville	Sullivan	Sept. 28-Oct. 1
Lancaster	Lancaster	Sept. 30-Oct. 1
Lehighton	Carbon	Sept. 30-Oct. 5
Honesdale	Wayne	Oct. 5-8
York	York	Oct. 5-8
Bloomsburg	Columbia	Oct. 5-9
Imperial	Allegheny	Oct. 12-14
Cumberland Twp.	Greene	Oct. 12-15
Milton	North'berland	Oct. 12-15
Lewisburg	Union	Oct. 12-15
Alexandria	Huntingdon	Oct. 13-15
Hughesville	Lycoming	Oct. 19-22
Oil City	Venango	Oct. 27-29
Lebanon	Lebanon	Dec. 3-4

Healthy Vegetables

The U.S. Department of Agriculture recommends that you rid your seeds and soil of infection before planting by using

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N. Y. WOOL ASSOCIATIONS PROVE SUCCESSFUL

Wool growers of New York State believe in cooperation because the value of co-operative wool selling associations has been successfully demonstrated. There are already 35 county co-operative associations working for the sale of their members' wool.

Two plans of wool sale have been followed—consignment and direct sale f. o. b. loading station, and both methods have succeeded.

The majority of the Associations organized under the co-operative law of New York State are incorporated. There is no capital stock in such associations but notes of the amount stipulated by the individual associations are given by members. These notes are used as collateral security when the association needs to borrow money. They are deposited with the bank loaning the money but are not cashed.

Cooperative Wool Grading Warehouse

Wool Sold on Graded Basis

All wool sold by the associations is sold on a graded basis, whether a consignment or a direct sale is made. The grading is done at the time of loading and before the grower's eye. This has an educational value. Such grading shows the grower the better wools and that dirty wool is not profitable.

A number of New York counties have already consigned their wool. The advance payments made so far are as follows: 55c for Delaine and ½ blood; 50c for ⅜ blood; 40c for ¼ blood and clothings; 20c for rejects.

From the gross sales of the wool there is deducted six percent commission for selling and interest on money advanced. In addition to freight and cartage on wool there is also deducted insurance and storage if wool remains unsold at the end of two months. The consignee furnished the sacks and a grader. Among the counties which have already consigned their wool are: Wayne, Yates, Livingston, Rensselaer, and Washington.

Orleans County has a strong association with an enthusiastic membership. The association's by-laws provide that each member who fails to live up to his pledge to sell his wool thru the association must forfeit 10c a pound. This rule has not decreased the growers' interest in their association as 145,000 pounds of wool has already been pledged.

A majority of the local associations have ordered paper twine for their members—the 4 ply best grade of twine being used. Orleans County has distributed one ton of such twine thru their association.

Some of the counties in Central and Western New York were well satisfied with the direct sales made last year. The wool was sold f. o. b. loading station and the details all cleaned up at once. Many prefer this method to the consignment plan as they know what they have in money at the time of loading. They do not care to speculate on the market.

The counties of Tompkins, Seneca, Tioga, Cortland and Cayuga pooled their interests last year in selling direct. The sale gave satisfaction and it is believed a direct sale method will be seriously considered in these counties this year.

Wool Exhibit

The directors of the State Federation of Wool Growers' Associations are working with the State Fair Commission in a plan to arrange a New York State wool exhibit with the 1920 State Fair held at Syracuse, N. Y. The plan is to offer premiums for the best county exhibit covering the six leading grades of wool and also premiums will be offered to individual exhibitors. This exhibit will stimulate interest in county sheep growers co-operative associations and work to stimulate the growing of better wool.—E. C. W.

OXFORD (CHESTER COUNTY, PA.) LIVESTOCK BREEDERS ORGANIZE

On Monday evening, June 28th, Dr. H. H. Havner, in charge of Animal Husbandry Extension from the Pa. State College, accompanied by the County Agent, Daniel S. Adams, met a group of twenty men at the Oxford Grange Hall to consider plans for the development of a breed of hogs on the community basis.

It was significant to note that the persons present had evidently fully made up their minds as to a breed choice before they came to the meeting because it was unanimously agreed that the Poland-China type of hog be adopted. After Dr. Havner outlined what had been done in 27 community Hog Breeders' Associations in various sections of Pennsylvania and set forth the necessary requirements for such organization, immediate action was taken, the Oxford Poland-China Breeders' Association was formed, Constitution and By-Laws adopted and the following officers were elected: S. Alexander Slack, President; Ed. Pugh, Vice-President, and Kirk Brown, Secretary-Treasurer.

Seventeen members were signed up in the association and they mean business. Such an organization has wonderful opportunities, and in addition to the great advantages it offers its members, it is one of the most effective methods of breed improvement and livestock development in any county. This furnishes another instance of the growing realization in the minds of our farmers of the mportance of getting rid of the "scrub" sire and breeding only from animals the records of whole ancestry is known, and it will ultimately mean much to Chester County in the way of improvement of its livestock.

The men in the Oxford Community who thus have associated themselves to work cooperatively for a common purpose are to be commended and their action should act as an impetus to encourage other sections of Chester County to initiate similar steps. The day of individual effort for the farmer is about past. Alone he can only hope for betterment of his conditions. By uniting his efforts with his fellow-farmers he is in a position to realize such hopes.—D. S. Adams, County Agent.

PENNSYLVANIA WOOL CLIP TO BE SOLD COOPERATIVELY

Cooperative wool sales have come to stay. The great interest that is being shown by sheep men in the marketing of the 1920 clip is ample proof that the cooperative selling of wool last year was a great success, and that a large percentage of the wools will be marketed in a similar manner in the future. Last year 190,000 pounds of wool were marketed collectively by the fifteen county organizations in Pennsylvania. A check on the pools shows that more than $13,000 additional was placed in the pockets of the growers than if they had marketed in the usual way. Better prices this year will greatly increase this return.

At the present time there are between 400,000 and 450,000 pounds of wool signed up to be marketed collectively in Pennsylvania, and as marketing time approaches, new men are joining the associations. All the county associations that will have 20,000 or more pounds of wool, are renting a warehouse, and will have the wools graded in the county. The old system of marketing was unsatisfactory, because the man who fed and cared for his sheep properly and put up a good, clean fleece received no encouragement. By selling on its market grade a premium is placed on clean, well grown wools and the grower who is careless discovers that it costs from fifteen to twenty-five cents per pound to collect seeds and chaff.

Those associations that are unable to rent a warehouse for the grading of their wool, consign their product to a commission house and receive an individual grade on each clip. The associations having only a small amount of wool sell on a flat basis ungraded.

Beware of hog cholera. Boars or sows taken from one farm to another for breeding purposes offer one means of spreading infection.

It doesn't pay to turn the livestock out to pasture too early; it's bad for the livestock as well as the pasture.

Facts in BLACK & WHITE

Holstein Registrations and Transfers Indicate Great Prosperity

The total number of purebred Holstein-Friesian cattle imported from Holland was 7,752, and from these have sprung all the purebred Holsteins in the United States and Canada, as well as the numbers exported to Australia, South Africa, New Zealand, Mexico and elsewhere. The Herd-Book of The Holstein-Friesian Association shows a total of 783,427 registrations and that of Canada 100,725. The transfer record indicates a state of demand, and it is of interest to know that in 1918, 94,465 transfers were recorded.

Europe will look to America to replace her breeding stock depleted by the war, and values of American Holsteins will make substantial advances.

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Martin's White Wyandottes $25.00 per 100. Ringlet or Parks Barred Rocks, Famous Anconas, Quality S. C. Reds $22.00 per 100. Eglantine S. C. White Leghorns $18.00 per 100. 25 and 50 lots, same price per chick. Order from this add SUNNYSIDE POULTRY FARM, Cooper Hill, N. J.

Hummer's Famous Chicks. Large, healthy and strong. Bar Rock per 100, $18; 50, $9.50; R. I. Reds 100, $19.50; 50, $10; S. C. B. Leghorns 100, $17; 50, $9; S. C. White Leghorns 100, $13.50; 500, $65; Anconas 100, $31; 50, $16. Prompt delivery each week, prepaid, live arrival. E. R. HUMMER & CO., Frenchtown, N. J.

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S. C. WHITE LEGHORN 2 year hens, also fine early hatch cockerels. Will sell at low prices. C. P. SHIREY, STEWARTSTOWN, PA

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Chronic Stiffness.—For the past six years my 11-year-old mare has been troubled with a stiffness and is gradually growing worse. She is fleshy and I am sure she has never been sick. S. A. S., Woodland, Pa.—Doubtless she is incurable. Give her a teaspoonful of powdered nitrate of potash in drinking water twice or three times a day.

Heifer Sucks Herself.—Have a heifer that sucks herself and wearing halter with nails in it fails to prevent her. W. H. C., Titusville, Pa.—Bore a hole in each end of a broom stick; tie one end to halter, the other to D ring in surcingle. If necessary, use one on each side of her.

Scours.—We have calf five months old that scours. Home and veterinary remedies fail to do any good. J. W. K., Bowerston, Pa.—Give him 20 grains salol at a dose four times daily. Give three or four ounces of castor oil right away; one dose only.

Warbles (Grub). — What can be done for grubs in cattle? P. C., Allegheny, N. Y.—Squeeze out grub. If necessary, enlarge opening in skin with sharp penknife and destroy grubs. Apply boric acid to sores daily.

Sore Teats.—Tell me what to do for sore teats in cows and oblige. E. E. W., Carroltown, Pa.—Apply equal parts tincture benzoin "compound" and glycerine to sore teats twice a day.

Cows Fail to Breed.—Several of my cows fail to get with calf. They come in heat irregularly, some every 10 days, others every 40 days. S. H. A., Roseville, Md.—Call your veterinarian and have him examine each cow. He will perhaps find cystic ovarian trouble which can perhaps be remedied, then the cows will get with calf. The cysts can be crushed thru rectum and vagina.

Sidebone. — Periostitis. — Last fall I bought mare which had sidebone on right fore leg. Lately she went lame, pastern is inflamed and tender. Is sidebone causing the lameness? S. L., Geneva, N. Y.—Give her rest and apply equal parts tincture of iodine and spirits of camphor twice a day. It is good practice to clip off hair and apply one part red, iodide of mercury and four parts lard every 12 days. The sidebone may be causing no lameness, but the periosteum which covers the bone may be inflamed, which when subdued will cause lameness to cease.

Sweeny.—Some two months ago we noticed that the shoulder muscles of our four-year-old colt were sweenied. The skin is not tight as usually found in such cases. This is a valuable mare and we would like cure. C. A. K., New Brighton, Pa.—Apply equal parts tincture of cantharides, turpentine, aqua ammonia and raw linseed oil to atrophied muscles of shoulder daily, until the parts are slightly blistered, then occasionally apply this remedy. Flirting with an ailment of this kind will not effect a cure, but if you will keep at it you will succeed. If you fail write us and we will prescribe a more heroic remedy.

Deep Milker.—Imperfect Udder. — Have a cow that will be fresh June 19. She is now milked daily, gives one gallon or more. How can I dry her? This cow had two frozen teats, one of them is open, the other blocked. Shall I keep up milking all four teats? A. B., Dennison, O.—All things considered, you had better continue milking her, using a clean milking tube to draw off fluid, from blocked quarter; also hand rub this part of bag.

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High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.
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Best and largest herd in East.
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Reg. O. I. C.'s 50 choice pigs ready for shipment. Gilts, service boars and bred sows for fall litters. We are over stocked, must sell to make room. Will ship C. O. D.
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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
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PUBLISHED WEEKLY

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A Review of the Feed and Grain Market

Present Prices and Prospects for the Future

By Sanders Sosland

The advent of the new crop season has brought with it a bearish tinge to the market for feedstuffs. Declines have not been of a general character, and on some commodities the recession has not been as sharp as the trade had previously anticipated. The readjustment from an old to a new crop basis carried down alfalfa, hay and other varieties of forage about $7 to $8 a ton. In the grain market a sharp downturn occurred in corn, which forced the leading coarse cereal to the lowest level in more than three months. Oats have held up comparatively well thus far, but progress of the new crop harvest is causing a change. Linseed feeds have eased off further, while cottonseed cake and meal have maintained a rather firm tone. Though down slightly, mill feeds have displayed surprising strength for the season.

Whether the downward tendency of values will gain momentum as the summer season advances is doubtful, of course. The declines thus far recorded have been almost insignificant compared with the advances of recent months, and prices are still at a high level. This, however, is not an important consideration so far as future price fluctuations are concerned. Serious doubt is expressed by some observers of markets as to a further decline in feedstuffs values, and there is probably as strong an element in the trade which holds to the theory that the high mark on the present movement has been witnessed and that declines will continue. A close study of the factors affecting the price movements fails to stimulate any strong bearish enthusiasm, the losses reflecting more a normal change from an old to a new crop basis.

"G's Big Lizz," a $5000 Sow, Carefully Carried in a Pneumatic-tired Truck

Corn is occupying a significant position in the market for feedstuffs. The coarse grain has broken badly and meat animal producers are buying the better grades of feeding corn around $1.50 a bushel again on markets of the Middle West, compared with prices above $2 a bushel earlier in the summer months. The factors which previously forced the sharp upturn in prices for corn still are present in the trade, but temporarily have been obscured by the excellent progress of the growing crop and the prospects for an enormous harvest within a few months. Weather conditions provided the basis for the bear raid. Taking advantage of an opportunity to cause a break in prices, the speculative element on markets has brought about strong pressure. Despite the excellent condition of growing corn at the present time, market operators have overlooked the fact that the plant is still about two weeks later than normal in growth, and that an early frost would cause serious damage. Also, corn has not yet entered its critical stage of growth, and the bullish operators call attention to the fact that there is as great a probability of a late summer drouth as for a continuation of highly favorable growing weather.

July is not a time to sell corn, nor the first half of August. One can prepare for crop scare reports, and whether or not they are justified by the condition of the plant, much will be heard of the enormous damage to corn by drouth, insects and similar ravages. Also, it is important to note that hogs are today higher with corn around $1.50 a bushel than when the coarse grain was bringing $2. Hogs are expected to continue to advance to around $18 per hundredweight the remainder of the summer, and this, of course, will stimulate feeding demand for the grain. The movement of corn to market will probably decrease in the near future, owing to car shortage and the tendency of carriers to divert available cars to the wheat belt to take care of the rush of the bread cereal to market. Stocks at terminal markets are extremely light, and this will forestall any prolonged bearish raid. The present market affords an opportunity to profit for the feeder who will soon be forced to make purchases. But purchases for consumption later than August do not now seem advisable.

The prospects for oats production are excellent as a rule, and a larger than normal crop is now expected, the yields in the more Southern portions of the growing belt showing an excellent outturn. So it is not surprising to note a disinclination to pursue vigorously the bull side of the oats market. That the record point on old crop oats and possibly well into the new crop has already been reached is the belief expressed by many observers of the trade. New oats marketing is progressing slowly, but as soon as the crop of the Northern and Middle West states becomes available for consumptive channels, prices may be expected to recede. The trade is even now discounting oats for September shipment about 20 cents a bushel under prices for delivery this month. The spot market is holding at slightly above $1 a bushel.

Millfeeds display probably greater strength than any other feedstuff commodity, and prices are at a comparatively higher level. Bran and shorts never before at the opening of a new crop year sold at so high a level as prevails today, the prices being within $7 to $8 a ton of the peak of the movement reached in May. In face of the excellent pastures over most of the Southwest and West, the augmented supply of feeds resulting from new crop harvests and the reduced consumption on farms at this season, the available offerings of bran and shorts are being readily absorbed. Dealers, millers and other handlers express confidence as to the future strength of the market, pointing to the fact that mill activity is extremely light, with little prospects of a normal production of bran and shorts until late in August. Demand for flour remains extremely light, and it is improbable that buying of new crop supplies will increase to the extent that mills will resume active operations for some weeks yet. Activity in the Northwest will not develop until the harvest of spring wheat becomes general.

Bran in Minneapolis is selling around $50 to $51 a ton, sacked, and around $49 to $50 for the offal in Kansas City. The Eastern basis is around $59 to $60 a ton. Gray shorts or flour middlings are bringing around $62 to $63 a ton in Minneapolis, $61 to $62 in St. Louis, as high as $64 in Chicago and $58 in Kansas City, with Philadelphia and surrounding markets of the East quoting around $67 to $70 for gray shorts, and $62 to $64 for brown shorts. The East is an important buyer, and along with the South is absorbing the

(Continued on Page 7.)

Don't board your horses this winter. Sell them now and let the INDIANA do their work.

YOU CAN sell four horses now, before the low fall prices are reached and do the work with an Indiana Tractor. You will not have to spend several hundred dollars to feed them over the winter. You will save at least an hour's work in the barn every day. The price of the horses and the cost of keeping them a year will more than pay for an Indiana Tractor.

You work for your horses almost as much as they work for you. You have work all the year around for one team but extra horses work for you only 90 to 100 days in the crop season. Yet you spend at least a month a year taking care of them—not counting the time you put in growing the crops they eat.

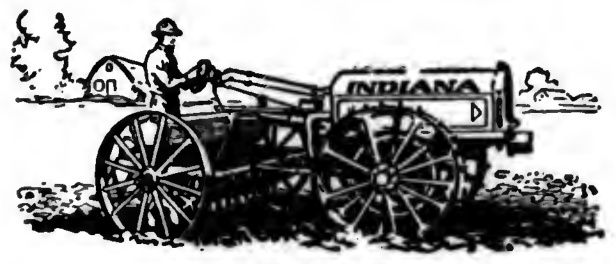
One man and an Indiana easily do the work of four horses and two men. The cost of fuel and oil is very much less than the cost of horse feed. The Indiana does *every* kind of work that horses do. The Indiana plows with disc or mold board, cultivates all row crops with one or two-row cultivator, pulls harrows, discs, planters, mowers, grain and corn binders, rollers, drills, cultipackers, potato diggers, and all orchard and vineyard tools.

It uses the horse-drawn implements you already have. The driver rides the implement as he does with horses and has the work in front of him. That's why one man and an Indiana can replace two teams and a man on the average farm. The Indiana is the all-round single unit one-man tractor.

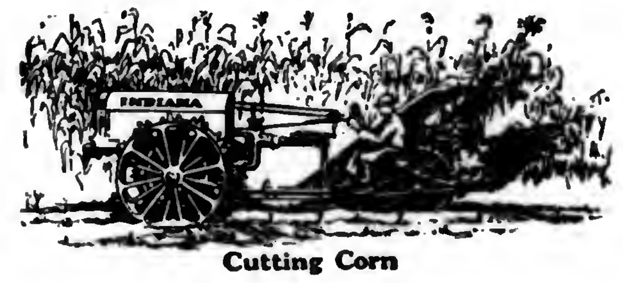
O. W. Ellis, Polk County, Iowa, says: "The tractor will surely do all you claim for it. I plowed 17 acres for wheat with a 12 in. disc gang plow and drilled it in and never used a horse in the field. I also plowed 30 acres of corn and cut 120 acres of small grain with an eight foot binder. The tractor has not given any trouble."

J. W. Van Pelt, Clark County, Ind., says: "In plowing I broke a sod field which had not been plowed for 25 years and was full of blind stumps. The tractor did the work fine. I have used the tractor successfully with the binder and mower. In fact I have not hitched it to anything without success. It has done all and more than you claim for it."

For four years the Indiana Tractor has been making similar records for owners everywhere; they are enthusiastic about it and many have not a horse on their farms. For almost 20 years the makers of this tractor have been known for dependable products and square dealing. They have a reputation for claiming for their products less rather than more than they will do. Ask any of the 75,000 owners of the Indiana Silo.

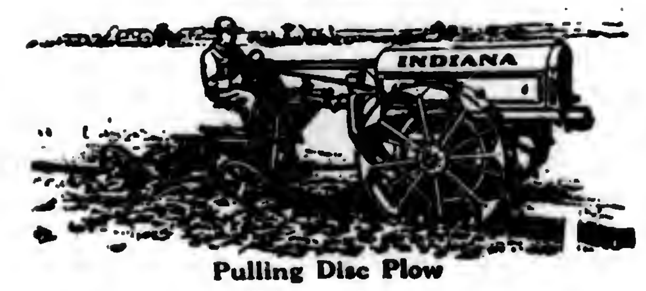


Sowing Wheat



Cutting Corn

Digging Potatoes



Pulling Disc Plow

Mail the coupon for book of pictures showing the Indiana Tractor actually doing all the work that horses do. Also the book of letters from users telling what they have accomplished with this tractor. If you need a Silo we have one for you—one that you can put up yourself without expert help.

DEALERS: This tractor can be used successfully by more farmers than any other. You can sell more of them than any other tractor. Write for our proposition.

THE INDIANA SILO & TRACTOR COMPANY

34 Union Building..........................Anderson, Indiana
34 Indiana Building........................Des Moines, Iowa
34 Silo Building...........................No. Kansas City, Mo.
34 Live Stock Exchange Building........Indiana Silo Company of Texas, Fort Worth, Texas

INDIANA
ALL-ROUND
TRACTOR
"The World's Tractor"

THE INDIANA SILO & TRACTOR CO. 34

Please send complete descriptive matter on the Indiana Tractor, and letters from users.

Name..........

Address..........

P. O.......... State..........

Country Life Broadens Vision

Short hours, Excitement and Amusements form only a single Phase of City Life--Ellen S. Brinton

Short hours, opportunities, excitement and amusement are the much thought of ideas of city life. But there are two sides to the question if we but take the trouble to dig under the surface. Simply moving off the farm, changing from a farmer to a city dweller, does not always mean an eight-hour day, a half holiday on Saturday, and all holidays and Sundays free.

The mass of city workers, or the majority of city people, have hours that are trying and hard. The worker must travel to and from business on his own time, and in large industrial plants a minute late often means fifteen minutes docked in pay. Sometimes one's work and living quarters are near, but more often there is an hour's ride in crowded cars in the morning and evening. Trolley riding may be a pleasant pastime among the fields and woods and country lanes, but two hours every day, frequently hanging on a strap, becomes a deadly grind. Watch the faces of the passengers in the evening and you will see the set lines of utter weariness and many of them nodding from fatigue.

Did you ever stop to think that keeping a city in running order means that many workers must be on duty all hours of the day and night? Farmers are not the only laborers who must get up early in the morning or work on Sundays. Trains and trolleys never stop. Nurses, telephone operators, hotel maids and waitresses are on constant duty. Firemen, police and postmen are on the job in separate shifts throughout the whole twenty-four hours and with no relief in stormy weather. Bakeries, newspapers, milkmen and the wholesale market must operate at night in order that the people may be served during the day. Restaurants must be kept open so that all these workers may be fed. Many of the great mills operate thruout the whole year—Sundays and nights as well as holidays. The Monday morning papers are always made up on Sunday.

The most distinctive feature of city life is that every one is fitted into a certain nitch in the great industrial machine. He stays there and does a particular job day after day. Very few city people have the farmer's privilege of shifting from one occupation to another every few hours; plowing one day, designing a new pigpen the next morning, followed by a cross-country drive to a cow sale in the afternoon—brain work alternating with physical labor.

Thousands of scrubwomen mop and polish marble floors every day at the same time. The elevator boy rides up and down one particular shaft six days out of seven. True, he is on the move, but his range does not permit much excitement or variation. The bank clerk adds and subtracts a column of figures in the same room every day. Merely handling a pile of money does not always mean riches or happiness. The sales clerk stands behind a two-foot counter and strives to please not only her half-hundred customers, but also all the store officials. The office clerk or stenographer has a desk, chair and file cases, all very plain and materialistic.

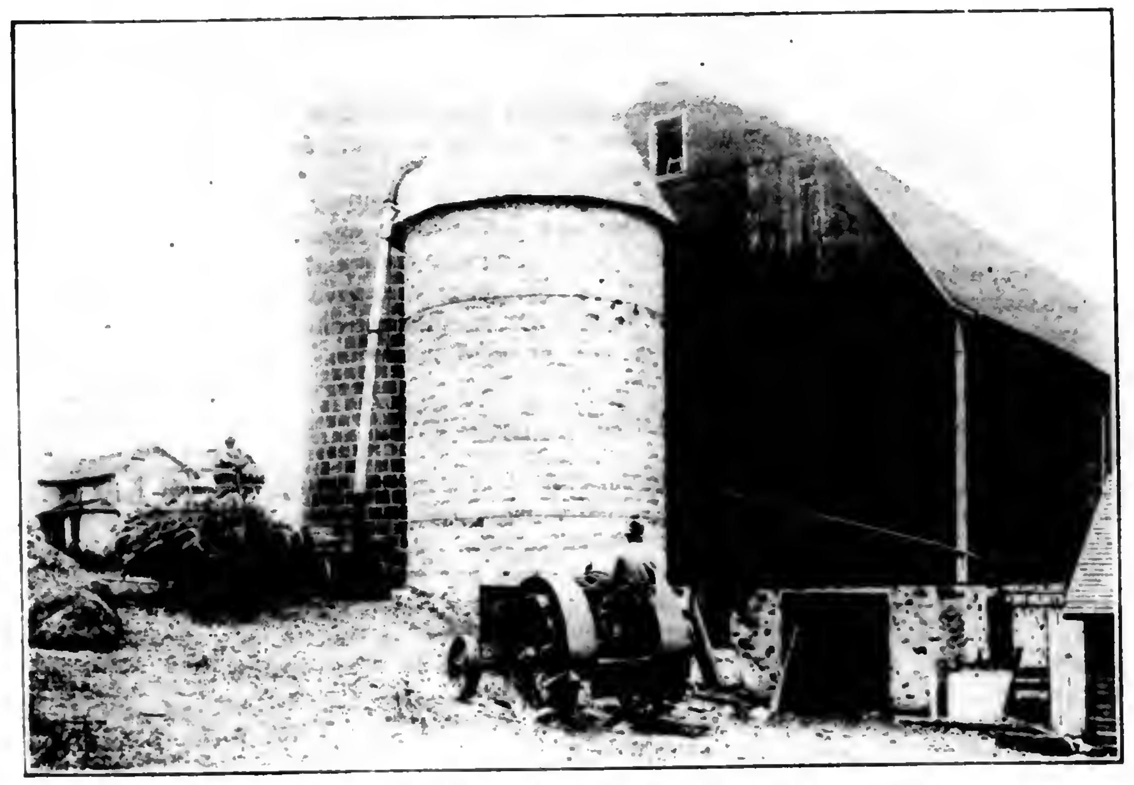
The majority of workers in the city are employed by the large stores, corporations, or industries. Few have the privilege of saying and feeling as the farmer may: "I am my own boss." The farmer's opportunities for diversified labor, the necessity for him to be able to turn his time, labor and ability to many different occupations is one of the greatest advantages of all that can be found in farm life. It keeps him from becoming a machine—merely a link in the industrial chain. To be a successful farmer he must have a smattering of a dozen trades and professions; from a carpenter to an electrician; a weather prophet to a veterinarian. These necessities are increasing in number as time progresses. A knowledge of gas engines is essential now and a "knack" for mechanics is as important as a "knack" for handling horses. The result is that if an intelligent farmer is a broad-minded, well-trained man he ranks far ahead of the average city craftsman, becuse conditions have developed individuality in him.

Expert economists declare that "the work of a farmer has more variety, more room for initiative and self-development than the work of the ordinary artisan or foreman." Because the employers know this a country boy or girl who is energetic and ambitious has excellent opportunities in the industrial life of a city. But no one should imagine that these opportunities mean a cushioned job on a golden chair. General intelligence and willingness will go far toward getting a job, but unless one has a special training in some particular line months and years will pass before the golden chair arrives.

During the last few months I have talked with a number of the officials of the Government employment agencies and the stories they tell bear out this statement. During the war pressure employers were anxious to secure and willing to keep labor of any kind, even though untrained. But since the armistice the demand has decreased. There is still a demand for certain kinds of help, but the mere clerk or laborer, the kind who knows nothing except to do as she or he is told, is simply not wanted. Skilled stenographers, expert milliners, experienced workers on factory machines, trained bookkeepers, high-grade salesmen, are the kind of help desired. The Government agents are doing everything in their power to keep the young people in school long enough to learn a definite trade of some sort, because skilled specialists are the only ones who draw desirable wages.

The training that comes with city life naturally produces these specialists easier than the farm. This is one reason that city bred people always have such difficulty making a success of farming. Farming requires something more than a one-line specialist and because a man has made a success at insurance, engineering or merchandizing does not mean he has the proper business qualities to manage profitably a dairy, a fruit farm or a flock of sheep. Because he has successfully outwitted all human rivals does not mean he has the same ability to overcome insect enemies or droughts, floods or fungus diseases.

Growing up in a business is an immense help, because so many of the details that spell success are thus acquired without effort. Those of us who have been brought up on a farm should appreciate the value of the inheritance and not throw it away lightly unless something better is definitely promised.



A Hollow Brick Tile Silo; Also One of Hollow Cement Tile

NEW YORK FARMERS' WEEK

Several thousand farmers visited the State College of Agriculture at Ithaca week before last. The attendance will warrant the College's making this summer meeting an annual event.

The evening sessions, opened by community singing in the big stadium, were largely attended. National Grange Master Lowell was to have given the chief address the first night but failed to arrive and S. L. Strivings, President of the New York Federation of Farm Bureaus, spoke at length on farm conditions in the State.

Sports were a prominent feature in the late afternoons, several county farm bureau associations sending excursions and putting on ball games.

Hundreds of children were royally entertained by the College with splendidly equipped playgrounds out of doors and rooms indoors for the smaller tots' convenience and amusement. Maypole dances, new games, sand piles, sliding boards and swings, story-telling periods and other diversions gave the little folks a beautiful time.

The older boys and girls were conducted about the campus and the 1500-acre farm to see various demonstrations of interest to junior project enthusiasts. Women's interests were capably cared for and their audiences were big at all sessions.

A big tractor demonstration, showing the work of nine tractors and of a five-horse team, was perhaps the biggest single feature of interest to the farmers. This was conducted two afternoons. A large exhibit of farm machinery of all sorts was also on exhibit.

During the forenoons a program of very wide interest was put on in the form of lectures, ten to twelve practical subjects being open to choice for each hour. These subjects covered many phases of dairying, fruit growing, poultry work, vegetable growing, crop production, plant diseases, work with bees, with flowers, greenhouse work, breeding, livestock feeding, and other valuable topics.

In the afternoons inspection trips to all parts of the big College farms, where a great variety of experimental work was in progress, made the big meeting very interesting as well as helpful.

The College rose and peony gardens were seen for the first time by hundreds of admiring visitors, as were the timothy and barley breeding plots, the corn test plots, the fertilizer experiments, the forestry plantation exhibits and many other operations.

Glista Ernestine, the world's record cow, holding six records made in six successive years, all over 30 pounds of butter in seven days, with four daughters and a $10,000 son, were on exhibit. Milking machine demonstrations and talks on the care and use of the machines were given.

Prof. G. F. Warren, of Warren formula fame, talked to a big audience on the outlook for farm prices. He gave a detailed account of the things that may be reasonably expected to happen that are of great concern to farmers. He urged farmers everywhere to study carefully the United States Crop Reporters, as well as the State publication along this line, as giving the only reliable clue us to probable prices in any commodity. He quoted potatoes as proof of this. The crop reports all over said last fall that potatoes were a short crop; also cabbage.

Yet farmers, many of them, sold early—direct from the field, at 90 cents to $1.25 per bushel for potatoes, and as low as $10 to $15 per ton for cabbage. Later in the season the price for these went to four times the early prices, as they were bound to do when so big and so general a mistake

(Continued on Page 17.)

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PHILADELPHIA, PA., JULY 24, 1920

VOLUME 48 NUMBER 4

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Third Party Nominates

AS WAS EXPECTED, a third party has been formed, a platform adopted and candidates nominated. This, together with the Socialist and Prohibition and Single Tax parties yet to nominate, will make at least five presidential tickets in the field and should give an opportunity for the expression of every shade of political opinion. More than the usual effort was made before the Republican and Democratic conventions by representatives of different interests to have those parties adopt their policies by planks in the platforms, but in both cases the platforms are less definite and more non-committal than usual, and because of the dissatisfaction thus engendered we have the usual number of smaller parties in the field.

While we hold no brief for any party, the impression gathered from reading the papers and listening to conversations, addresses and resolutions is that this is not a good time to attempt radical changes, simply because the public mind is not in condition to make them wisely. It is evident in every field of endeavor that the experiences of the war have so agitated public sentiment by the creation of abnormal desires and opinion that we are temporarily unfitted to make great changes. This is not to be taken as a denial of the need of changes, but the public mind should have time to get back its normal sanity and judicial sense before attempting them. Those who desire progress and improvement in government and social affairs would do better service just now by using their influence to calm the troubled times and to keep purely reactionary sentiment from gaining ascendency in these excitable times and undoing what progress has been made during the past twenty years. While it is not a propitious time to make haste forward, neither is it the time to take steps backward.

We do not know to what extent farmers had a hand in forming the new party, but the papers refer to it as the Farmer-Labor party, and because of this we give a summary of the platform adopted:

1. Americanization: Demands the right of free speech, amnesty for political prisoners, repeal of espionage, sedition and "criminal syndicalist" laws, referendum and recall for federal judges and equal suffrage for all.

2. Demands withdrawal of the United States from participation under the Versailles treaty in the reduction of conquered peoples to economic or political subjugation, recognition of the republic of Ireland and the "new Russian government," abolition of secret treaties, and withdrawal of the United States "from the dictatorship we exercise over the Philippines, Cuba, Porto Rico, Guam and Hawaii." This section also pledges support to "a league of free peoples."

3. Demands democratic control of industries, laying down the "right of labor for an increasing share in the responsibilities of industry."

4. Calls for public ownership of all public utilities and natural resources and immediate repeal of the Esch-Cummins railroad law.

5. Demands favorable laws for farmers, establishment of public markets, extension of federal farm loan system, organization of state and national service to guide applicants for farms and farmers already on land and promotion of farmers' benefit organizations which "actually will help."

6. Advocates government economy to replace "extravagance that has run riot under the present administration," denouncing the system that "has created one war millionaire for every three American soldiers killed in France," demanding that war-acquired wealth be taxed so as to shift the tax burden from the poor, expressing opposition to consumption taxes and recommending steeply graduated income taxes for federal revenue, and taxation of land valued and sharply graduated inheritance taxes for State and local government.

7. Urges reduction of the cost of living by stabilization of currency, federal control of meat packing industry and enforcement of present laws against profiteers, "especially the big ones."

8. Favors "justice to soldiers of the world war as a matter of right and not of charity," recommending payment of a sum "sufficient to make their war pay not less than their peace-time earnings."

9. Labor's bill of rights, which includes declarations for the unqualified right of all workers, including government workers, to strike.

Freedom from compulsory arbitration.

Maximum standard eight-hour day and forty-four week.

Old age unemployment payments and workmen's compensation to insure workers against accident and disease.

Abolition of employment of children under 16 years, complete and effective protection of women in industry with equal pay for equal work, abolition of private employment detective agencies used against strikes and exclusion from interstate commerce of convict labor products.

Personal Credit Bills

PERSONAL CREDITS is a subject which is likely to receive considerable attention in Congress when it meets again. In fact, there is a bill, commonly known as the McFadden Bill, which is being pushed by many bankers, Congressmen and business men as the ideal in the way of furnishing a method of providing personal credits for farmers. It is long, cumbersome and somewhat involved, so that it is difficult, without a great deal of study, to know whether it is the right thing or not. There are a few questions which we would like to have cleared up. For instance, why is it necessary to tie up with the insurance companies or any eixsting financial institution, instead of organizing purely co-operative farmers' societies as in Europe? Why is it that the same men who oppose the Federal Farm Loan banks are anxious for this particular personal credits law? And why are the men who fight against a law giving farmers the right of collective bargaining—something absolutely necessary to farmer prosperity—so considerate of his welfare by their advocacy of this bill? We are not making any argument for or against the McFadden Bill at this time, but a joker is so often found in the philanthropic work done by others for the farmer that it has bred in us the trait of shyness, which persists until we are thoroly convinced of a thing's worth.

An easier way to get into debt is not the greatest need of farmers today. What is needed far more is opportunity to realize a fair return upon their labor and capital. When they can legally organize for productive and marketing purposes, and when they have fully availed themselves of the opportunity, there will be far less need of devising schemes for questionable benefits. Here is a chance for those who would benefit agriculture, whether they be outside exploiters or inside uplifters.

Prospective Pork Prices

THE ERRATIC condition of trade is shown by the export market for pork. Only a short time ago the European trade had dwindled to almost negligible quantities, while today the trade has increased to a considerable extent. This is partly due to the improvement in exchange rates and partly due to increased ability to buy. The foreign demand, which is likely to continue, coupled with inadequate shipping facilities from the West, creates a situation favorable to Eastern hog raisers and the indications are that pork will bring high prices this fall.

Farm Bureau Organization

A COMPETENT committee has been appointed to study the question of state organization of farm bureaus in Pennsylvania and also to consider the advisability of adopting the paid membership plan. Farmers of the State are at present divided upon the latter subject. It is to be hoped that there will be a careful consideration of the plan before action is taken, and we would invite short, pointed discussion of the question thru "Pennsylvania Farmer." The principle of farmers fianancing to a large extent their own organizations is a vital one. A present criticism from those not farmers is that the Government is patronizing the farmer unduly. Then there is the demand made by other interests that farm bureaus shall engage in nothing but purely productive enterprises because they are operating at public expense. Farmers are fully able to finance their own organizations and we do not believe that the majority feel like being called pensioners in matters that pertain to their business alone. Even tho the paid membership plan is adopted it will not debar non-members of the county from receiving the services of the county agent. As regards the State and national federation of farm bureaus, we believe it will add strength and usefulness to the movement, providing it is conducted on safe lines.

Our Washington Letter

The House Ways and Means Committee of which Representative Joseph W. Fordney, of Michigan, is chairman, is devoting considerable attention during the vacation season to the consideration of various phases of tariff revision, which it is hoped will be of benefit to agriculture, and give greater stability to the farming industry.

The bill to put a duty on potato flour as a means of promoting the production of potato flour in this country, developed an interesting discussion last winter, but it did not get out of committee. It will be included in the general tariff revision when Congress meets in the fall.

The manufacture of potato flour is a comparatively new industry in the United States. It is a development of the war period. In 1918 there were five natural potato flour plants in operation and these plants produced 2,500,000 pounds of potato flour, which is largely consumed by bakers, and at that time there were under construction in this country five more potato flour plants with a yearly capacity of 5,000,000 pounds. These plants are located in the potato growing sections of Idaho, Nebraska, Michigan and Ohio. They utilize to a considerable extent those tubers that are not available for market.

* * *

The bill to give protection to the bean industry, which was on the calendar when Congress adjourned, will be taken up for action early next session. In submitting his report from the Ways and Means Committee, Chairman Fordney said that "temporary lower prices might be obtained in certain food commodities by encouraging imports from abroad, but it would be a grave economic mistake to favor any policy that will render this country unable to feed itself, and such a policy can only result in serious food shortages and increased prices in times of deficiencies in the world's production. He who talks about the importation of farm products as a means of reducing the cost of foodstuffs for the American people is only arguing in favor of an eventual crisis in the food supply which would stagger the nation."

The bill to increase the tariff on beans will not get through Congress without opposition. A minority report argued that "beans are a common article of food and the increase in cost of living, especially to the poorer classes, if the bill should be enacted into law, would be appalling." It was claimed that the 100,000,000 people in the United States who consume beans ought not to be barred by a tariff law from the use of the cheap Asiatic beans for the protection of the 70,000 bean growers in Michigan and other states. Edible beans have been taxed 25 cents a bushel under the present law. The proposed law will increase the tariff to $1.20 a bushel.

* * *

The old Lane-Mondell soldiers' aid land reclamation scheme will not down. Hidden away in the Borah "World War Farm and Home Building Act" it received a favorable committee report just before Congress adjourned, and it is in a favorable position to get through when Congress meets again. As the National Grange Washington representative points out, "all that is objectionable in the Mondell bill is included, except that

this bill only asks for three hundred million dollars instead of four hundred million dollars. This makes three forms in which this plan will be up in Congress in December. It will take a bigger fight than that of last summer to head off this treasury raid."

As is the case with the other so-called veterans' aid bills, the Borah bill contains a loophole by which the gigantic land reclamation scheme is not limited to soldiers, the text reading that "any unit not allotted to a veteran or repatriate within one year after the publication of a notice in respect thereto, may be disposed of to qualified citizens under provisions to be prescribed by the Secretary of the Interior.

* * *

In his annual address before the National Lime Association President Charles Warner emphasized the need for developing adequate storage for lime for agricultural purposes in order that farmers may be able to find liming material available when they are ready to use them. He suggested that lime producers organize warehousing and sales companies to erect and manage local storage warehouses to various points thruout the country.

* * *

The American Railway Express Company has asked the Interstate Commerce Commission to approve its continued operation as a consolidation of the Wells-Fargo Company, Adams Express Company, American Express Company and Southern Express Company. Officials of the consolidated company told the commission that $31,000,000 was needed for equipment and additions to its existing facilities and it would be difficult to obtain this sum from the banks unless the consolidation was continued.

* * *

The falling down of the railways in freight transportation is giving the Interstate Commerce Commission much trouble. It is not confined to any one section or industry. The Virginia potato growers, with a large crop, could sell their tubers at from $10 to $11.50 a barrel, but are largely prevented from taking advantage of these high prices because of a lack of cars. The railroads need to haul 4000 cars of coal daily to the Great Lakes ports to supply the Northwest with coal. The average daily delivery of coal for the Northwest is 1675 cars, one-half the quantity said to be necessary as insurance against coal famine in the Northwestern states. The wheat growers, lime manufacturers, fertilizer manufacturers, lumber men and representatives of other industries are begging the Interstate Commerce Commission to provide cars sufficient to meet their present needs.

* * *

It is the opinion of those who have made the subject a study, as given out by the American Farm Bureau Federation Washington office, that the present freight transportation crisis is not so much an actual shortage of cars as of labor efficiency. It is shown that there is a total shortage of 150,000 to 200,000 freight cars out of a total of 2,300,000 cars, less than 10 percent. While there has been 10 percent increase in business offered, these two factors do not account for the breaking down in transportation.

* * *

The Farm Bureau office suggests that if the freight rates are increased to an extremely high level it will be hard to get them down again and that the time for the farmers to make a fight for reasonable rates is now. They are willing that labor should have a decent wage, but they have no patience with inefficiency of labor, whether it be wilful with the idea of creating more jobs, or as a result of habits formed during the war period.

* * *

It is pointed out by men here who are familiar with the grain situation, that shipment of wheat is going to be slow. Farmers will be compelled to enlarge their granaries or use other means of storing their grain. This, however, may not be a disadvantage, as the world conditions indicate that wheat prices will be higher than at present.

* * *

There are some interesting developments in the fertilizer trade. J. I. Tierney, Washington representative of the American Fertilizer Manufacturers' Association, who has made a survey of the fertilizer trade for fall shipment, says the situation is alarming. The trade asked to have orders placed early. The manufacturers have the orders but cannot get cars to ship the goods. It will require 22,000 cars to handle the Middle West shipments in addition to the present supply, and the car shortage in the trucking sections is nearly as bad. He is asking the farm organizations to join in an appeal to the Interstate Commerce Commission for priority of orders on the ground that the movement of fertilizers is next to moving food crops as a public necessity.

* * *

Dr. Edward K. Nelso, chief of the Biological survey of the Department of Agriculture, is on his way to Alaska to study the reindeer with the idea of making this animal an important source of meat supply. Since 1893 the Alaska herds have increased from 143 to 150,000 animals.

* * *

The Department of Agriculture reports that a satisfactory crop of Kanred wheat is being harvested on the half million acres planted to this grain in Kansas, and that six or seven million acres will be planted to this variety the coming fall. It is said to be more resistant to winter killing and the rusts than other varieties.

* * *

It is evident that the next Secretary of Agriculture will be a real business farmer, both Senator Harding and Governor Cox saying they favor the appointment of a "dirt farmer," one who has made a success on the farm.—Elmer E. Reynolds.

HARRISBURG LETTER

Stand By Estimates.—Officials of the State Department of Agriculture declare that as a result of the reports received from more than 900 districts of the State they believe their figures of 27,500,000 bushels of wheat will stand and that the crop will be good in quality in spite of some reports of ravages by the rust and fly. The preliminaries to the monthly crop show good hay, corn and potato conditions in the main. The hay and potato acreages are not as great as last year and neither is that devoted to corn, because of the shortage of labor. Weather conditions have not caused much damage and as a general proposition the staple crops look well. The survey of the apple and peach crops has been producing favorable reports and in a number of instances the growers say they are more bothered by fear of shortage of labor than anything else.

Call for Harvest Hands.—Harvest hands are being sought by farmers in every part of the State and only neighborhood and community work is saving wheat and rye in some portions of the State. Demands upon the State employment service have been extremely heavy and in some of the cities high school students and young men willing to take a little vacation on the farm have been forwarded to the fields. But the demand is far beyond the supply.

Road Work To Be Reduced.—The State Highway Department has decided not to let any additional contracts except in boroughs where there is urgent need, because of the general situation which has arisen in regard to materials. The plan of going beyond the 1000-mile mark has been given up for the present and the program will be reduced to a certain extent. The State has let 1000 miles of road construction since the Sadler administration of the Highway Department began and almost 800 miles are under way with contractors just waiting for the materials to start the rest. All efforts will be bent to completing what has been started or about to begin.

Not Agricultural.—A rather interesting decision in regard to an accident and the right of the injured man to claim benefit of the State rehabilitation law to enable him to learn a new trade came from the Attorney-General the other day. He ruled that a coachman sent to pick cherries and who loses a leg by falling from a tree cannot be considered as having suffered an industrial accident. On the other hand, a man who is injured harvesting or in a corn shredder can receive rehabilitation benefits. The policy is not to consider any accidents as agricultural. Industrial makes the test.

The Cold Storage Situation.—Fewer eggs are in cold storage this year than for a long time and there has also been a general reduction of meats with exception of pork. Later reports would indicate still further withdrawals and the October report may show a marked decline in the amount of food held. Incidentally, there has been no reduction of flocks of sheep in spite of the wool situation.

More Agricultural Courses.—While there will be more agricultural and vocational training courses authorized for the start of the second season next month, there will be fewer teachers. School districts in various parts of the State have been sending pleas for teachers, but while the State has opened a bureau that will be a clearing house for teachers wishing places and boards wanting teachers, there is a dearth of persons wanting to be instructors even at advanced salaries over last year.—Hamilton.

NEW YORK LETTER

Cheese Steady.—For the past two weeks chees has held at 25½ cents wholesale against 31 cents a year ago. The offerings are about one-fourth less than a year ago.

Troopers Weighing Trucks.—State police are weighing all trucks that pass certain points to maintain the highway laws regarding weight of trucks.

Wool Trade Halted.—The public's refusal to buy high-priced clothing has reacted on the wool producers very harmfully. Wool buyers have called their agents in and refuse to buy, expecting, it has been said, to get all the wool they want soon at cost of freight. Farmers fear a sheep panic and have taken action in this State to prevent destruction of the industry by forming a State-wide pool of the 1920 clip. Representatives of the wool associations of twenty counties voted to establish a pool, with expert sales-manager, to engage a central warehouse and to perfect plans for assembling, grading and selling the wool. The entire clip of seventeen counties has been pledged already and all of the remaining eighteen counties of the State federation are expected to come in with 1,250,000 pounds, which will be held for a higher market. This is the first step of the kind and is expected to bear far-reaching results, probably in organizing the wool industry of both the East and West in creating a better market, better wool, and more of it. The people need more wool clothing and less shoddy, and only co-operation will bring best results.

Potato Farms.—Potato experts of the State studied Long Island test fields last week to determine which seed from the leading growers of the Eastern States and Canada is most free of disease. Last year Cortland County seed had this distinction in a large number of tests, so on August 6 and 7 the State Potato Growers' Association will spend two days inspecting Cortland County fields.

Sugar Asked For.—Market commissioners of the State have appealed to the Presideant for a prompt and fairly liberal supply of sugar for preserving and for some effective policy to prevent a recurrence of the present deplorable sugar condition.

Cannery News.—The pea crop is being secured rapidly. The crop is a plentiful one. The average price paid is $80 per ton of shelled peas. The lake districts are packing cherries. Sweet cherries are but a 50 percent crop and bring growers 10 cents a pound. Sour cherries will be plentiful. A camp of 200 to 300 girls is helping Lodus farmers secure the crop. Strawberries are gone but held good in price through the glut. The acreage was good and will be increased over last year's.

Farm Bureaus.—Wayne County leads the State in number of farm bureau members at $2 each. It has 2307 paid-up membership. Niagara County is second with 2034, and Chenango third with 2006. A fruit expert is employed by the county to supervise spraying, etc, and it has a big drainage project under way with two State ditches in use. Dairy and poultry demonstrations are frequent, with many projects in crop and vegetable growing.

Permanent Indian Village at Fair.—Agricultural leaders have lent their influence to secure appropriations for an Indian stockade village of careful historic construction as an exhibit and memorial to the original dwellers here—the Six Nations. It will be partially completed this year and will be truly representative of Indian life and its arts and crafts.

NEW JERSEY NEWS

Farmers Co-operate.—One of the important moves made by prominent farmers in the southern part of New Jersey was the chartering in the office of the Secretary of State here of the Farmers' Co-operative Association of Cape May County. The organization has located headquarters at Grange Hall, in Rio Grande, with the object of producing preserving, drying, canning and otherwise treating agricultural and other kinds of products. The incorporators and prominent promoters of the Association are A. Carlton Hildreth, of Cape May Court House; Bernard Treoman, of Rio Grande; O. S. Richman, of Cape May Court House, and H. W. Spaulding, of Whitesboro.

Defer Road Policy.—New Jersey's new road policy is not to be considered by the recently named Democratic State Highway Commission until July 28 next, pending action of the State Senate on appointments to the Board by Governor Edwards. The Governor feels that the roads of the State have been badly neglected thru manner of operation of the old board and he hopes to spur on the work of repairing and constructing the State Highway that will cost, according to his view, about $40,000,000 instead of $15,000,000, as was thought.

Crops Fare Well.—All crops in the State have fared well so far, due to a large measure to favorable weather conditions, and while the estimated production of all crops with the exception of potatoes and hay are under 1919, they are considerably above the ten-year average. Rainfall, accompanied by warm weather, improved the condition of corn in all sections. The present condition is about 94 percent of a normal, indicating a yield of 38.2 bushels per acre and a total production of 9,817,000 bushels as compared with 10,800,000 last year, and 10,603,000, the average production for the past ten years. The condition of wheat is about 78 percent of a normal, indicating a yield of 16.3 bushels per acre and a total production of 1,540,000, as compared with 1,962,000 last year and 1,602,000, the average production for the past ten years. The conditions of potatoes is about 92 percent of a normal, indicating a yield of 115 bushels per acre and a total production of 12,305,000 bushels, as compared with 10,560,000 last year and 9,903,000, the average production for the past ten years. The condition of sweet potatoes is about 88 percent of a normal, indicating a yield of 128.5 bushels per acre and a total production of 1,799,000 bushels, as compared with 1,750,000 bushels last year.—Kelly.

COMING EVENTS

New York State Potato Association, annual meeting and tour, Cortland, N. Y., August 6-7.

Apple Shippers' Association, Chicago, Ill., August 11-14.

Vegetable Growers' Association of America, twelfth annual meeting, Columbus, O., August 25-28.

Hornell Fair, Hornell, N. Y., August 31-September 3.

New York State Fair, Syracuse, September 13-18.

Agricultural Society of Queens-Nassau Counties, annual fair, Mineola, N. Y., September 21-25.

Farmers' Industrial Exhibit and Picnic, Williams' Grove, Pa., August 30-September 3.

Eastern States Exposition, Springfield, Mass., September 19-25.

Midsummer Meeting of Maryland Horticultural Society, at New Windsor, Md., July 29. Auto tour in forenoon.

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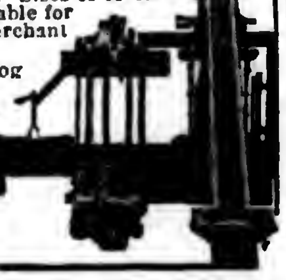

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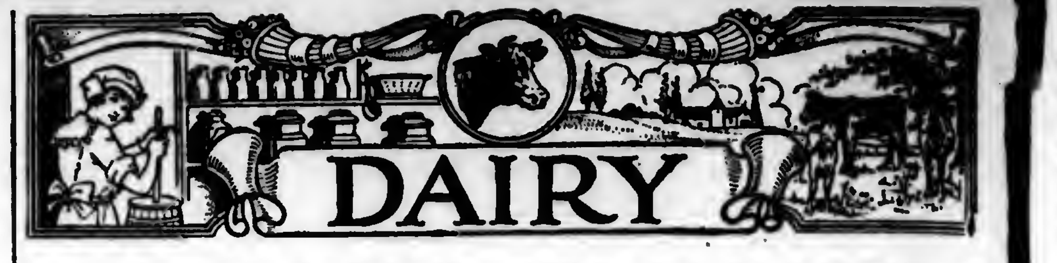

SUMMER DAIRY REMINDERS

Did you ever sit on a screened porch, eating home-made ice cream, and watch the cows that made the cream suffering in the heat and fighting flies that were stinging them to desperation? It is apt to make a man ashamed of himself and then buy some good fly dope to spray the cattle and help to keep them comfortable.

* * *

Shade in the pasture helps to keep the cows healthy and productive during hot weather. We have an old apple orchard which our cows enjoy as part of their pasture. They take a few apples from the lower limbs and the orchard is left in sod. But the cool shade for the cows helps to make up for any loss of fruit.

* * *

Calves should not be left in hot, unclean pens during the summer. It prevents a thrifty growth and it only takes a little more time to care for them in the right manner and give them the clean pens that will be free from flies and odors. Calves staked along the roadside during the summer need plenty of fresh, clean water. It takes time to supply it, but neglect causes losses in growth and vigor.

* * *

It pays to dehorn the calves and not wait until the horns have to be sawed off from mature cows. This causes the animal needless suffering and reduces the milk flow for a long time after the operation. It is a very unpleasant job to dehorn a cow and much better to have the work finished during the calf age.

* * *

The amateur cow buyer at an auction can learn something by watching the professional cattle buyers. One of our neighbors says that he is always willing to bid $10 to $15 more for a cow than our most expert cattle buyer is willing to pay. That is the amount that the buyer figures on making on a good grade dairy cow. The neighbor says that when the stockman stops bidding he always knows that the cow has reached a point very near to its actual worth.

* * *

The buying of pure-bred cattle takes considerable money and many farmers lacking in capital seem to do a fairly safe and profitable dairy business with high quality grades. But they always use pure-bred sires and their new stock improves every year and more nearly approaches the quality of the pure-bred herd of good producing ability. Of course, pure-breds are the best and most profitable but there is not enough to go around at this time. But there are always enough pure-bred sires to insure a chance for improving the quality of the grades.

* * *

The best and biggest value for our money that we obtain every year is the use of a registered Guernsey bull from a record cow. The neighbor charges a fee of $3 per service. We pay cash on the spot and would pay more if he asked it. The small service fee insures quality calves. A farmer with a pure-bred bull can hardly afford to bother with a 50-cent or $1 service fee business. If it is not worth more than that something is wrong. It takes time to care for a herd bull and frequently come in from the field when breeders arrive with stock.

* * *

Give the herd bull a cool shed and use fly dope on him. It makes a bull ugly to suffer from flies and hot weather. Do not tie the bull by the roadside without being sure that the chain is strong. A lose bull on a public highway has caused many a farmer a lot of worry and possibly serious injury might result to children playing in the road. One neighbor had a Holstein bull break through a weak fence into a herd of pure-bred Guernseys. Such accidents do not ruin friendship but they are an unnecessary test of friendship that can be avoided by properly controlling a bull.—R. G. Kirby.

THE SUMMER SILO

The silo can be used for both winter and summer, or silage can be fed the year round in all seasons. By the summer silo we refer particularly to the supply of silage during the summer months. Silos, as a rule, are bought with the idea of supplying winter feed. Silos are put up in the summer, filled in the fall, and generally before new grass comes every bit of silage is gone and the dairyman especially notes at this time a severe shrinkage in milk flow. Profit in the dairy means supplying the animal with its requirement at all times, never allowing it to shrink through want of food. A shrink is unprofitable. It cannot be made up and it is bad business. For this reason and many others the summer silo is rapidly gaining favor.

I recently heard a well-posted dairyman remark that if he had to choose between winter and summer silage feeding he would prefer to go without the winter supply. This man had much experience in the business; he knew that the biggest damage to a dairy herd is generally produced during July and August, when pastures become dry and short, flies are bad and conditions most unfavorable. The lure of the pasture is too great for the average cow-keeper. It is so easy to simply turn the cows on the pasture and forget them except, perhaps, on a Sunday once in a while when they are salted, or if they be milk cows when rounded up morning and night for milking. True, there is a short season, especially in the corn belt, when pastures are exceptionally good. In May and June we generally find the grass tender and green and plentiful in quantity, but even during these months silage can be fed with profit to any class of cattle.

As time goes on silage will be used more and more for summer feeding. Experience has taught that it is economical and makes for large and economical production. It is the cheapest source of summer feeding and it prevents the dairy herd from experiencing that fearful shrink which we note each year during the months of July and August. The feeder will learn that he can keep his animals in full flesh and vigorous condition during a period when they are, as a rule, set back and made strippers and unprofitable winter producers. With the summer silo the small farmer living on 40 or 80 acres can keep a good herd of cattle and do it with profit. The man who is attempting to farm too much can find this method practical and much more profitable; he should sell half his land and farm the other half better.
—A. L. Haecker

BRADFORD COUNTY, PA., ASSOCIATION

For the past month there were 430 cows in the six cow-testing associations in operation in Bradford County, Pa., that produced 40 pounds or more of butter fat.

The Canton association leads the list with 128; the Troy association is second with 102; the Wyalusing association is third with 74; the Laurel Hill association is fourth with 57; the Rome fifth with 40, and the Wilmot sixth with 29.

The highest cow for the county is a grade Holstein owned by C. S. Chaffee, of the Laurel Hill association. She produced 81.7 pounds of butter fat. The second high cow is a registered Holstein in the same herd. Her record is 75.8 pounds of butter fat. The third high cow is a registered Holstein owned by C. W. Newman, of the Wyalusing association. Her record is 74.4 pounds of butter fat. The fourth high cow is a registered Holstein owned in the same herd as the first two high ones. Her record is 69 pounds of butter fat.

STORAGE BUTTER CONTEST AT 1920 NATIONAL DAIRY SHOW

When Mr. White, in charge of dairy manufacturing investigations, in the Dairy Division at Washington, suggested to the management of the National Dairy Show that a very important class could be added to the contests of the show—i. e., a storage butter contest, and gave his reasons, the management very quickly agreed with Mr. White that it would be a very good class to add. As late as April 26th the classes to cover this storage butter were agreed upon as whole milk and hand separator cream. By the time the announcements were given to the press and the form prepared to make entry there was a very limited time before June 12th for the creamery men to make up their minds to enter these contests, but proof that a great many creamery men agreed with Mr. White that these storage classes would develop a great interest, is demonstrated by the fact that sixteen whole milk entries were made and forty-five hand separator—in all sixty-one entries of storage butter now in storage awaiting judgment next October.

A REVIEW OF THE FEED AND GRAIN MARKET

(Continued from Page 1.)

bulk of the offerings. Bran for August shipment is selling at a discount of about $2 a ton under the spot market, and about $3 a ton less for September. Bids are more numerous than offers, millers as a rule being unwilling to book ahead their output of feed at a discount under the current figures. Feed for deferred shipment is going into strong hands, which reflects a strong undertone for the August and September markets. It is probable, however, that September will witness an easier level of prices, in view of the present prospects for active production of mills by that time.

Firmness is quite generally in evidence in the market for the high protein feeds, and advances, while not sharp, are probable before the close of summer. Buying of cottonseed cake for summer feed on grass is already developing on markets of the Southwest, and as the demand broadens with the advance of the season, so does the market strengthen in tone. The stocks of prime grades of cottonseed cake are scarce in crushers hands over the Southeast and Southwest, most of the holdings being made up of the off-grade supplies which are being absorbed by manufacturers of fertilizer and commercial mixed feeds. There is a tendency among cattle handlers to rush maturity of their stock, and the recent improved tone of the market for beeves has stimulated the feeding of high-priced cottonseed cake and meal. The current market for cake and meal is holding around $62 a ton for 43 percent protein feed, basis Texas points, and around $64 to $65 in Oklahoma. Some are forecasting $70 a ton for 43 percent cake before the close of August, or before new crop offerings become available in the South. Crushers and dealers have been indulging in speculative transactions in new crop offerings for September shipment. The early trading was around $64 a ton, basis Texas points, at a premium of $2 a ton over the spot market, though bids have since fallen to a discount of $2 a ton, around $60. The rather discouraging prospects regarding the growing crop make for bullishness in the trading in new crop cake and meal.

Linseed feed production has been stimulated moderately by increased demand for linseed oil, but lack of supplies of flaxseed is hampering the activity of crushers. Demand for linseed cake and meal is not of a broad volume, but sufficient to absorb the small offerings. Crushers are holding their product around $64 a ton, basis Minneapolis, and are demanding a slight premium for deferred shipment. So far as can be learned, exporters are buying practically no cottonseed or linseed feed, owing to abnormal foreign exchange conditions and high prices quoted for the domestic product.

The hay trade is rapidly becoming readjusted to a new crop basis, though the declines thus far have not been so sharp as anticipated a month or two months ago. Alfalfa is selling at a top of $31 a ton in Kansas City, the largest forage market in the country, with the cheapest grades down to $14 a ton, about $7 to $8 a ton lower than the level prevailing at the close of the old crop movement. Some doubt is expressed in trade circles as to the probable demand from the East for alfalfa. Clover production in the East will be considerably greater than a year ago, and dairymen of that section may not turn to this section for supplies of alfalfa in as large a volume as in the past crop year. Still, it is claimed that the East has become so accustomed to alfalfa and has found its use so satisfactory that it will continue an important consumer of the forage. Much alfalfa is moving to the East now. Alfalfa may ease off further in price, but with the movement to market seriously restricted by car shortage and inability of producers to obtain baling wire to prepare their harvests for market shipment, the trade will remain above a normal level. In the event of further declines in prices before the close of August, dairymen of the East will probably profit by accumulating stocks for later consumption. The hay moving to market is of excellent quality as a rule.

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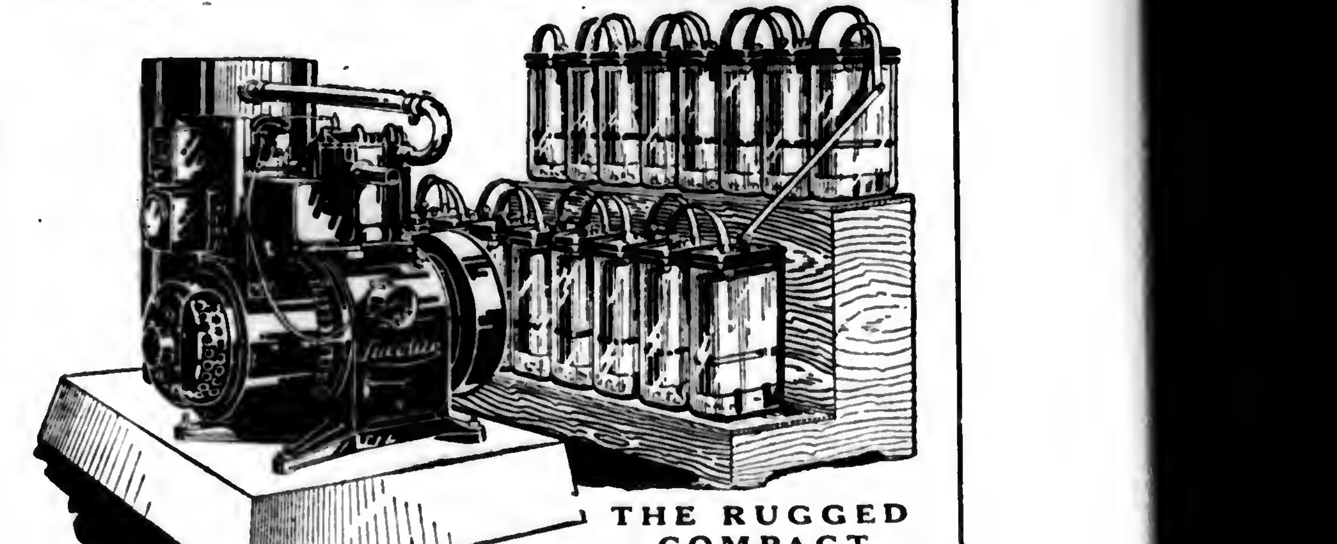

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ORCHARD COVER CROPS

J. P. STEWART

This is the time of year when the good orchadist naturally begins preparations for the winter cover in his orchard if he has been following the tillage treatment. The writer has never become very enthusiastic over the usual methods of annual cover-crop seeding in orchards. They are frequently sown too late and plowed under too early in the spring to ever get any noticeable benefit from them. This is particularly true in the case of the clovers, which are, theoretically at least, among the best plants that can be used in orchards. They are all nitrogen gatherers, which element is generally the chief fertility need in orchards, and most of them are relatively light in their moisture draft, which is often of prime importance.

Of the various clovers, crimson is generally preferable for annual use in orchards, wherever the winter conditions are not too severe. It usually starts more promptly and makes a larger growth in the fall than any of the others. The cost of its seed is generally more reasonable than most of the others, and under present conditions it is doubtful whether any other kind of clover should be used in orchards at all, until the present acute shortage of seed is overcome. In any case, it is advisable to get the seed sown within the first two weeks in July, and preferably immediately after a good rain in order to get a reasonable amount of growth in the fall. Ten or twelve pounds of seed to the acre should be enough and even less may be satisfactory if put in especially well.

A Two-row Cultivator

In some parts of the State a sufficient natural growth is usually obtained to give a satisfactory winter cover, simply by checking the cultivation, about the first of July. Quack-grass or witch-grass, which is usually a serious pest in competition with most annual crops, frequently becomes a real asset in the orchard when handled in this way. In one of the large orchards of southern Pennsylvania, no other annual cover-crop is needed, and it even becomes so abundant that it is often mowed before fruit-picking begins. In the vineyards of Erie County also, the common chickweed usually forms such a prompt and complete carpet over the ground after cultivation ceases, that no other winter cover is necessary. In the writer's opinion this kind of cover-crop is always worth considering, and judging from the results of extensive experiments in this State, the chances of additional profits from the specially seeded annual crops are relatively small, where such natural covers can be obtained.

Other important and relatively inexpensive annual cover-crops are millet, Dwarf Essex rape, cowhorn turnips, buckwheat and rye. The first four of these are frost-killed, so they do not furnish as good winter protection as may be desired, when planted alone, altho the millet is usually best in this respect. Rye is important from the fact that it can be planted so late and still make a good cover. It is probably best when planted in the early part of September, but it can be planted any time from the middle of August to the middle of October with satisfactory results. The amounts of seed usually sown of these crops, when planted alone, are as follows: Millet, about twelve to fifteen pounds to the acre; rape, about six to eight pounds; cowhorn turnips, about two to three pounds; buckwheat, about one to one and a half bushels; rye, about one and a half to two bushels. In mixed plantings the amounts of each are reduced to about half these rates when two kinds are used, about a third of each when three are used, and so on.

More Permanent Orchard Covers

While it has not been definitely proved experimentally, yet in the writer's opinion the way to get the most out of the slightly longer-lived clovers is to let them grow during at least the first year after planting. Such a system could be readily followed with the bi-ennial clovers, such as the red and mammoth, in a two-year rotation, plowing or disking only one-half of the orchard each year and allowing the remainder to run along under a mulch system during the year the clover would ordinarily mature. Two or more clippings should, of course, be given during the latter year to prevent too heavy a draft on the moisture, and to get the maximum amount of organic and nitrogenous matter out of the clover. When the clover is plowed under by the middle of May or earlier the first season after planting, very little of its possible capacity for nitrogen-fixing is ever

realized, and this may be one of the principal reasons for the general failure of the annual leguminous crops to show any important value in the experiments conducted for several years by the writer.

With legumes of still longer life, such as alsike and alfalfa, longer rotations are possible, and correspondingly smaller proportions of the orchard would need to be cultivated each year. The latter is an especially important item in these days of costly and vanishing farm labor. The high value of the relatively permanent orchard cover furnished by alfalfa, moreover, has been fully demonstrated both practically and experimentally when it is properly managed and there is no reason to suppose that alsike under similar conditions will not do approimately as well.

Getting the Permanent Cover Started

Probably the best and easiest way to get the alfalfa started is in connection with a seeding of rye in the way that has been used so successfully with wheat on some of the farms in Lancaster County. This method was apparently devised by one of the extension men at the State Experiment Station, and at least has been put into successful practice on his place, as already stated in this column, but the essentials of it will undoubtedly bear repeating.

As a regular farm-crop rotation the alfalfa under this plan is sown along with wheat at the rate of 12 pounds to the acre, and the seeding may be as late as the first week in October. The alfalfa seed is placed in the timothy hopper of the drill and is carried by means of pieces of garden hose directly into the drill shoe, which places it right in the row with the wheat. This secures some protection for the young alfalfa during the winter and also gets it rather deeply rooted in the soil, which usually makes it successful. The same thing can undoubtedly be carried out similarly in orchards, with rye as the nurse crop.

This gets the alfalfa sown with a minimum of extra labor, gives it winter protection, and also makes it possible to get a good start for the mulches by affording a clipping of both rye and alfalfa during the first season after seeding. The usual precautions of soil or seed inoculation and of sufficient liming to insure a fairly sweet soil, are doubtless necessary in this method as in all other standard methods of alfalfa seeding.

In this connection it might be sufficient to follow a very simple method of inoculation that is frequently used in inoculating sweet clover seed in the West. This method has apparently been developed fairly recently, but at the same time it seems to be working. In it they usually take about a gallon of surface soil where either sweet clover or alfalfa has been growing normally and stir it into a bucket of water. They then wet the new seed thoroly with this mixture, dry it in a shady place as the sun kills the desired bacteria, and sow at once, perhaps preferably in the manner above indicated.

Where either alfalfa or any other relatively permanent cover is used it is well to maintain a fairly regular rotation on approximately a five-year period, for example. This enables the desired cover to be renewed, kills off the blue grass that usually works in where any legume is growing, and prevents the mice from getting too well established.

Where the seed is available at a reasonable price preference should probably be given to the so-called hardy strains of alfalfa, such as the Grimm, on account of their more branching root-systems and greater average production of tops for mulching or its equivalent.

HARDY ALFALFA FOR ORCHARDS

Those who are considering the use of alfalfa in at least a part of their orchards in order to reduce the amount of labor needed during the present trying times, should be interested in some of the results that have been obtained in a comparison of alfalfa varieties for general haymaking purposes in New York.

As most of our readers doubtless know, there are several varieties or strains of alfalfa, which differ rather markedly from the common variety and are generally considered to be more hardy. These varieties have branched and spreading root systems, depressed or recessive crowns, and they bear flowers of different shades of green, purple, yellow, or variegated colors, while the common alfalfa has tap roots, exposed crowns and purple flowers. The commonest of the so-called hardy varieties are the Grimm, the Baltic and the Ontario Variegated.

In comparisons of these and similar strains with the common alfalfa in New York during the last two or three years, a rather surprising superiority over the common alfalfa was generally noted. After three years of seeding, the stands of the variegated varieties were uniformly thicker and the weeds were fewer in their plots than in those containing the common alfalfa. The yields of hay were also very much greater from the variegated sorts, ranging from two to seven times as much in the first cuttings of the season, and yielding about twice as much in the second cuttings. Many miscellaneous observations also agreed with these results. Present indications are, therefore, that the variegated alfalfa is proving much superior to the common alfalfa in New York, and the more adverse the conditions the greater is the apparent superiority of the variegated forms.

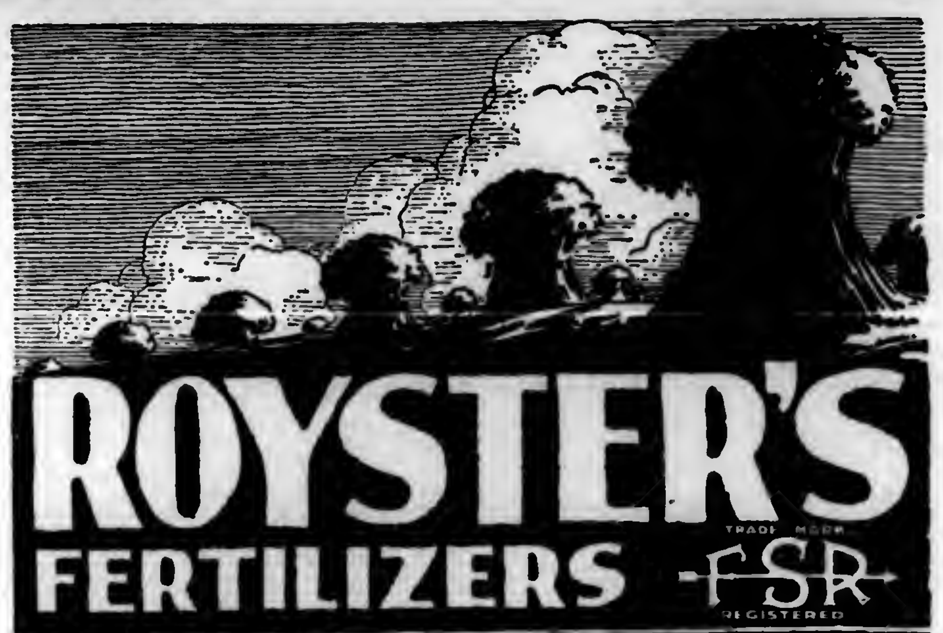
The strains named above have given the best results in the direct comparisons made. The supply of seed of the Baltic and the Ontario Variegated has been rather small and the price correspondingly high, however, so that most attention has been given to the Grimm, which has been available in reasonable quantities and at relatively reasonable prices. Care should be used in the purchase of any of these strains, however, as the common alfalfa seed is often sold to inquirers for the variegated sorts and at the prices quoted for the latter types. Probably the most reliable sources of authentic seed are from firms vouched for by the experiment stations in the northwestern states, and especially by those in the Dakotas, Montana and Minnesota.

—J. P. Stewart.

Orange rust on raspberries can be kept from spreading by prompt removal of the rusted plants.

Leaf spot in strawberries can be greatly lessened by mowing off and burning the tops after picking.

Cabbage worms may be killed by spraying the plants with powdered arsenate of lead, one pint mixed with three pints of air-slacked lime or cheap flour.



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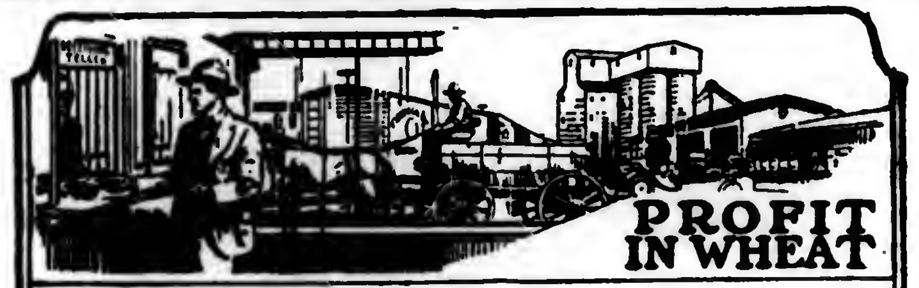

There will doubtless be less wheat sown in the fall of 1920 than was sown in 1919. Yet there are very many farms on which the crop will be sown with the double purpose of producing wheat and providing a convenient means of seeding clover and grass, even if but small profit is derived from the wheat itself.

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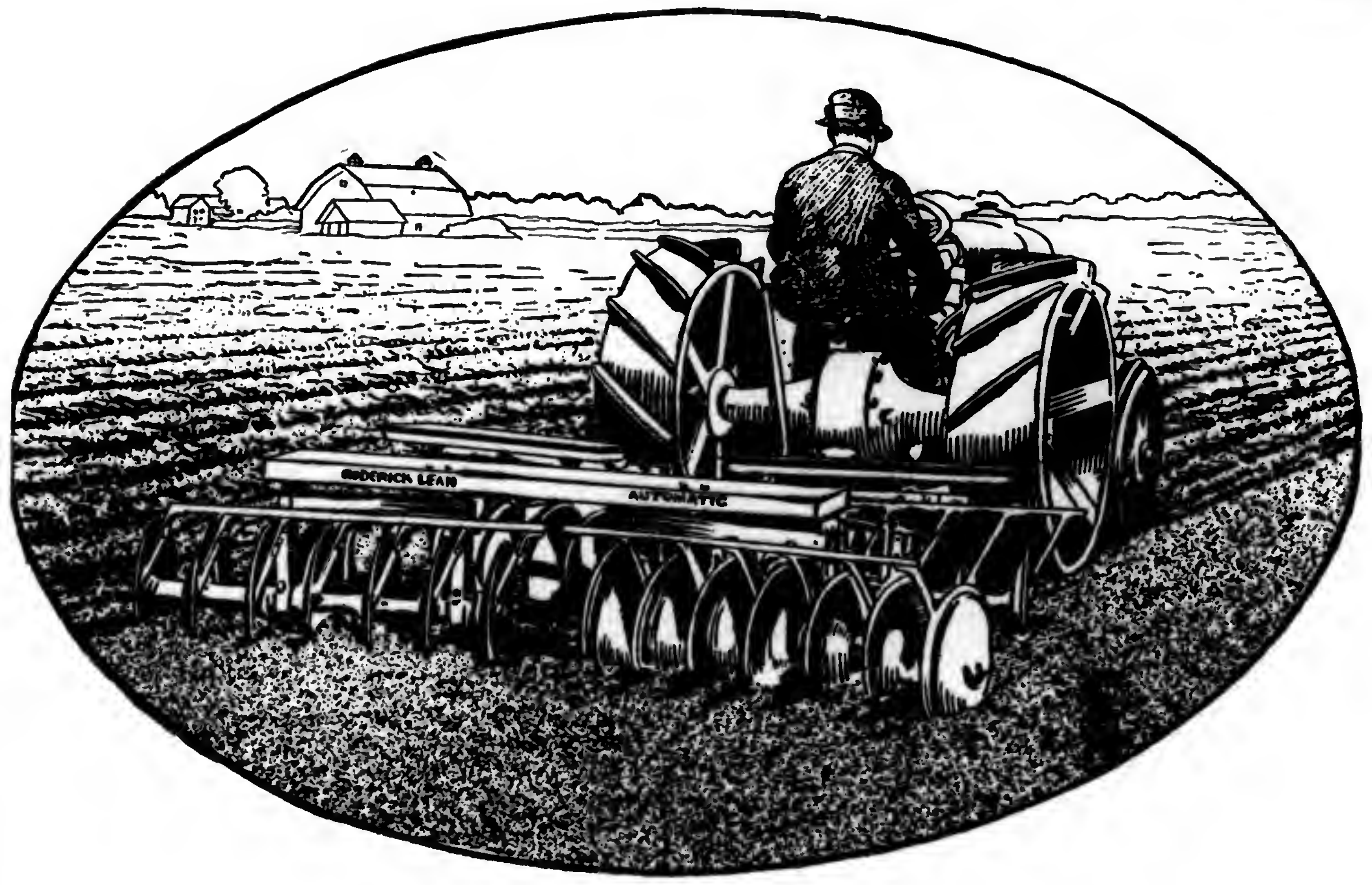

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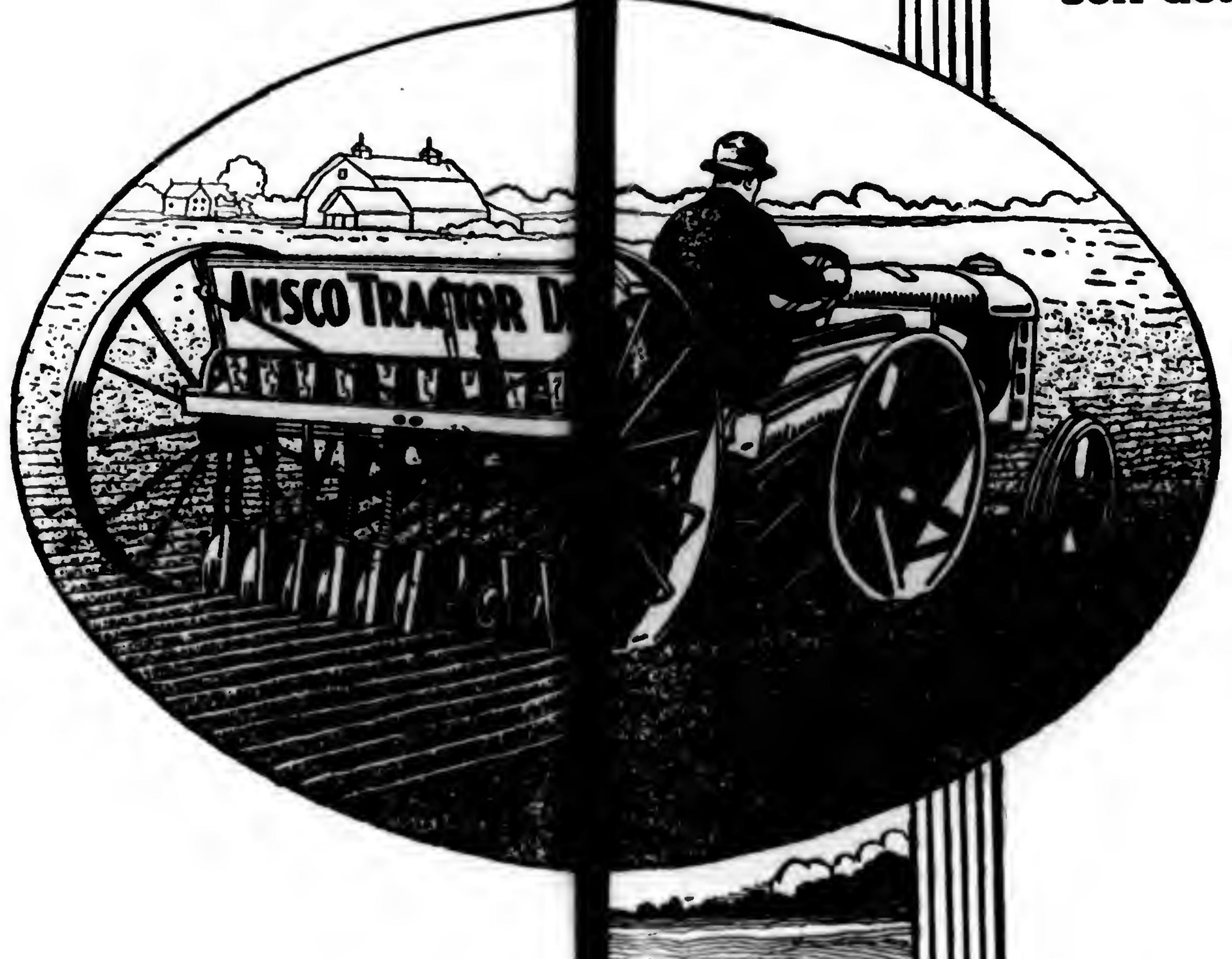

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Whispering Smith

by Frank H. Spearman

CHAPTER XIX

(Continued from Last Week.)

They had moved to the front porch and Marion was sitting in the rocking-chair. Dicksie stood with her back against one of the pillars and looked at her. As Marion finished Dicksie turned and, with her hand on her forehead looked in wretchedness of mind out on the valley. As far, in many directions, as the eye could reach the waters spread yellow in the flood of sunshine across the lowlands. There was a moment of silence. Dicksie turned her back on the alarming sight. "Marion, I can't do it!"

"Oh, yes, you can if you want to, Dicksie!" Dicksie looked at her with tearless eyes. "It is only a question of being plucky enough," insisted Marion.

"Pluck has nothing to do with it!" exclaimed Dicksie in fiery tones. "I should like to know why you are always talking about my not having courage! This isn't a question of courage. How can I go to a man that I talked to as I talked to him in your house and ask for help? How can I go to him after my cousin has threatened to kill him, and gone into court to prevent his coming on our land? Shouldn't I look beautiful asking help from him?"

Marion rocked with perfect composure. "No, dear, you would not look beautiful asking help, but you would look sensible. It is easy to be beautiful and so hard to be sensible."

"You are just as horrid as you can be, Marion Sinclair!"

"I know that, too, dear. All I wanted to say is that you would look very sensible just now in asking help from Mr. McCloud."

"I don't care—I won't do it. I will never do it, not if every foot of the ranch tumbles into the river. I hope it will! Nobody cares anything about me. I have no friends but thieves and outlaws."

"Dicksie!" Marion rose.

"That is what you said."

"I did not. I am your friend. How dare you call me names?" demanded Marion, taking the petulant girl in her arms. "Don't you think I care anything about you? There are people in this country that you have never seen who know you and love you almost as much as I do. Don't let any silly pride prevent your being sensible, dear." Dicksie burst into tears. Marion drew her over to the settee, and she had her cry out. When it was over they changed the subject. Dicksie went to her room. It was a long time before she came down again, but Marion rocked in patience: she was resolved to let Dicksie fight it out herself.

When Dicksie came down, Marion stood at the foot of the stairs. The young mistress of Crawling Stone Ranch descended step by step very slowly. "Marion," she said simply, "I will go with you."

CHAPTER XX

At the Dike

Marion caught her closely to her heart. "I knew you would go if I got you angry, dear. But you are so slow to anger. Mr. McCloud is just the same way. Mr. Smith says when he does get angry he can do anything. He is very like you in so many ways."

Dicksie was wiping her eyes. "Is he, Marion? Well, what shall I wear?"

"Just your riding-clothes, dear, and a smile. He won't know what you have on. It is you he will want to see. But I've been thinking of something else. What will your Cousin Lance say? Suppose he should object?"

"Object! I should like to see him object after losing the fight himself." Marion laughed. "Well, do you think you can find the way down there for us?"

"I can find any way anywhere within a hundred miles of here."

On the 20th of June McCloud did have something of an army of men in the Crawling Stone Valley. Of these, two hundred and fifty were in the vicinity of the bridge, the abutments and piers of which were being put in just below the Dunning ranch. Near at hand Bill Dancing, with a big gang, had been for some time watching the ice and dynamiting the jams. McCloud brought in more men as the river continued to rise. The danger line on the gauges was at length submerged, and for three days the main-line construction camps had been robbed of men to guard the soft grades above and below the bridge. The new track up and down the valley had become a highway of escape from the flood, and the track patrols were met at every curve by cattle, horses, deer, wolves, and coyotes fleeing from the waste of waters that spread over the bottoms.

Through the Dunning ranch the Crawling Stone River makes a far bend across the valley to the north and east. The extraordinary volume of water now pouring through the Box Canyon exposed ten thousand acres of the ranch to the caprice of the river, and if at the point of its tremendous sweep to the north it should cut back into its old channel the change would wipe the entire body of ranch alfalfa lands off the face of the valley. With the heat of the lengthening June days a vast steam rose from the chill waters of the river, marking in ominous windings the channel of the main stream through a yellow sea which, ignoring the usual landmarks of trees and dunes, flanked the current broadly on either side. Late in the afternoon of the day that Dicksie, with Marion sought McCloud, a storm drifted down from the Topah Topah Hills, and heavy showers broke across the valley.

At nightfall the rain had passed and the mist lifted from the river. Above the bluffs rolling patches of cloud obscured the face of the moon, but the distant thunder had ceased, and at midnight the valley near the bridge lay in a stillness broken only by the hoarse calls of the patrols and far-off megaphones. From the bridge camp, which lay on high ground near the grade, the distant lamps of the track-walkers could be seen moving dimly.

Before the camp-fire in front of McCloud's tent a group of men, smoking and talking, sat or lay sprawled on tarpaulins, drying themselves after the long day. Among them were the weather-beaten remnants of the old guard of the mountain-river workers, men who had ridden in the caboose the night that Hailey went to his death, and had fought the Spider Water with Glover. Bill Dancing, huge, lumbering, awkward as a bear and as shifty, was talking, because with no apparent effort he could talk all night, and was a valuable man at keeping the camp awake. Bill Dancing talked and, after Sinclair's name had been dropped from the roll, ate and drank more than any two men on the division. A little apart, Mcloud lay on a leather caboose cushion trying to get a nap.

"It was the day George McCloud came," continued Dancing, spinning a continuous story. "Nobody was drinking—Murray Sinclair started that yarn. I was getting fixed up a little for to meet George McCloud, so I asked the barber for some tonic, and he understood me for to say dye for my whiskers, and he gets out the dye and begins to dye my whiskers. My cigar went out whilst he was shampooing me, and my whiskers was wet up with the dye. He turned around to put down th' bottle, and I started for to light my cigar with a parlor-match, and, by gum! away went my whiskers on fire—burnt jus' like a tumbleweed. There was the barbers all running around at once trying for to choke me with towels, and running for water, and me sitting there blazing like a tar-barrel. That's all there was to that story. I went over to Doc Torpy's and got bandaged up, and he wanted me to go to the hospit'l—but I was going for to meet George McCloud." Bill raised his voice a little and threw his tones carelessly over toward the caboose cushion: "And I was the on'y man on the platform when his train pulled in. His car was on the hind end. I walked back and waited for some one to come out. It was about seven o'clock in the evening and they was eating dinner inside, so I set up on the fence for a minute, and who do you think got out of the car? That boy laying right over there. 'Where's your dad?' says I; that's exactly what I said. 'Dead,' says he. 'Dead!' says I, surprised-like. 'Dead,' says he, 'for many years.' 'Where's the new superintendent?' says I. 'I'm the new superintendent,' says he. Well, sir, you could have blowed me over with a air-hose. 'Go 'way,' I says. 'What's the matter with your face, Bill?' he says, while I was looking at him; now that's straight. That was George McCloud, right over there, the first time I ever set eyes on him or him on me." The assertion was met with silence such as might be termed marked.

"Bucks told him," continued Bill Dancing, in corroborative detail, "that when he got to Medicine Bend one man would be waiting for to meet him. 'He met me,' says Bucks; 'he's met every superintendent since my time; he'll meet you. Go right up and speak to him,' Bucks says: it'll be all right.'"

"Oh, hell, Bill!" protested an indignant chorus.

"Well, what's er matter with you fellows? Didn't you ask me to tell the story?" demanded Dancing angrily. "If you know it better than I do, tell it! Give me some tobacco, Chris," said Bill, honoring with the request the only man in the circle who had shown no scepticism, because he spoke English with difficulty. "And say, Chris, go down and read the bridge gauge, will you? It's close on twelve o'clock, and he's to be called when it reaches twenty-eight feet. I said the boy could never run the division without help from every man on it, and that's what I'm giving him, and I don't care who knows it," said Bill Dancing, raising his voice not too much. "Bucks says that any man that c'n run this division c'n run any railroad on earth. Shoo! now who's this coming here on horseback? Clouding up again, too, by gum!"

The man sent to the bridge had turned back, and behind his lantern Dancing heard the tread of horses. He stood at one side of the camp-fire while two visitors rode up; they were women. Dancing stood dumb as they advanced into the firelight. The one ahead spoke: "Mr. Dancing, don't you know me?" As he stopped her horse the light of the fire struck her face. "Why, Mis' Sinclair!"

"Yes, and Miss Dunning is with me," returned Marion. Bill staggered. "This is an awful place to get to; we have been nearly drowned, and we want to see Mr. McCloud."

McCloud, roused by Marion's voice, came forward. "You were asleep," said she as he greeted her. "I am so sorry we have disturbed you!" She looked careworn and a little forlorn, yet but a little considering the struggle she and Dicksie had made to reach the camp.

Light blazed from the camp-fire, where Dicksie stood talking with Dancing about horses.

"They are in desperate straits up at the ranch," Marion went on, when McCloud had assured her of her welcome. "I don't see how they can save it. The river is starting to flow into the old channel and there's a big pond right in the alfalfa fields."

"It will play the deuce with things if it gets through there," mused McCloud. "I wonder how the river is? I've been asleep. O Bill!" he called to Dancing, "what water have you got?"

"Twenty-eight six just now, sir. She's a-raising very, very slow, Mr. McCloud."

"So I am responsible for this invasion," continued Marion calmly. "I've been up with Dicksie at the ranch; she sent for me. Just think of it—no woman but old Puss within ten miles of the poor child! And they have been trying everywhere to get bags, and you have all the bags, and the men have been buzzing around over there for a week like bumblebees and doing just about as much good. She and I talked it all over this afternoon, and I told her I was coming over here to see you, and we started out together—and merciful goodness, such a time as we have had!"

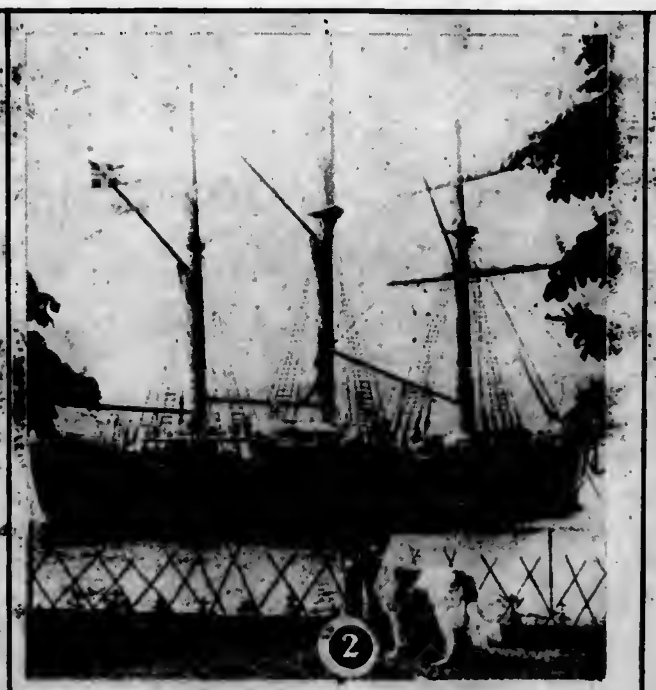
"But you started out together; where did you leave her?"

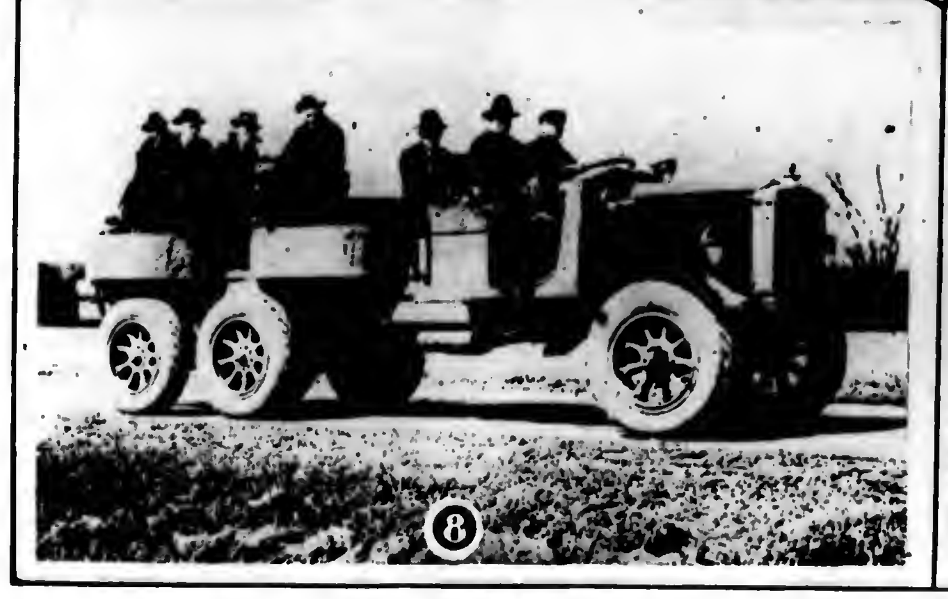
"There she stands the other side of the fire. O Dicksie!"

"Why did you not tell me she was here!" exclaimed McCloud.

(Continued Next Week.)

PASSING EVENTS IN PICTURES





(Photo Copyright by Underwood & Underwood.)

1—"Miss Wyoming" delivering Round-up invitations upon arrival from Cheyenne.

2—Roald Amundsen and the "Fram" in which he made his South Pole trip.

3—The "John Jay" taking the water at the shipyards, Gloucester, N. J.

4—Max Rindskow demonstrating his life-saving gun, which shoots a rope 1400 feet.

5—Portrait by Stone of the Honorable Cynthia Ramsey and her two children.

6—Betty Berry taking the Hurdles with "Fearnot" in the hunter class.

7—Touring Yellowstone Park on the opening day, June 20.

8—The latest development in motor trucks devised to save rubber.

9—Fort Johnson, Florida, built in 1845, after a severe Hurricane.

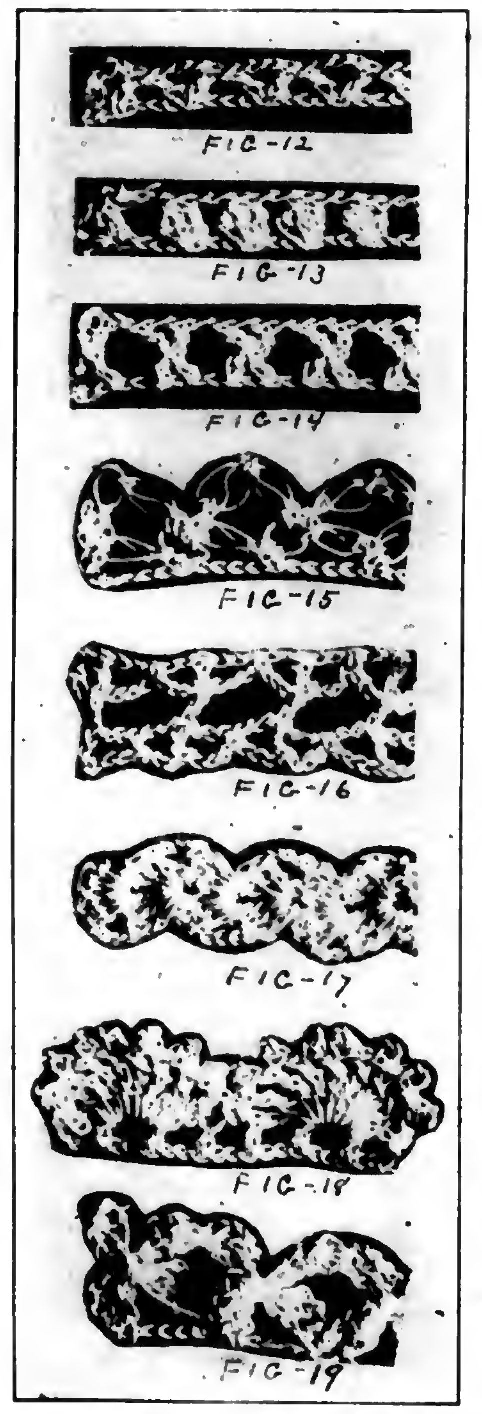
LESSON ON FUNDAMENTAL STITCHES OF CROCHET WORK—Part II

By JEANETTE BELL

No. 12, Triangle, tri: make a ch, skip 5 sts, * 1 d c, 3 ch sts, 1 d c into the same st, from * forms 1 tri.

No. 13, Cluster, cl: make ch, skip 3 sts, start a d c, draw thread through 2 sts, * thread over hook, insert hook into same st, thread over hook, draw through 2 sts, repeat * having 4 loops on the hook, thread over hook, draw through all 4 loops, 1 ch st, to fasten cl. When a longer cl is required make it of t c instead of d c.

No. 14, Cross Treble, c t: make ch, skip 5 ch sts, * thread twice over hook, insert hook into ch st, draw thread through, thread over hook, skip 1 ch st, insert hook, draw thread through, thread over hook, through 2 loops, thread over hook through 2 loops, thread over hook, through both. Repeat *, skip 3 ch sts, through 2 loops, 1 d c, 1 ch st, insert hook into 2 sts at the joining of the 2 lower sections, make 1 d c, from * forms 1 c t.



Lessons in Crocheting, No. 2

No. 15, Knot Stitch, kn: make ch, * draw loop on hook out to $\frac{1}{4}$ of an inch in length, thread over hook, draw through loop, insert hook back through 1 long loop, thread through, making 2 loops on hook, thread over, through both. Repeat *, skip ch sts, 1 s c, continue for the length required. Next row: make 2 knots, 1 s c into 2nd kn of 1st row, 1 s c, next to this st, catching 2 threads of long loop, 1 kn.

No. 16, Lacet, La: make a ch, skip 5 sts, * 1 d c, 3 ch sts, skip 2 sts, 1 s c, 3 ch sts, skip 2 sts, from * forms 1 La, on the next row: 1 d c over d c, 5 ch sts, over La, forms 1 sp, make these two rows alternately for the length required.

No. 17, Fan, f: make 5 ch sts, 3 t c, 2 ch sts, 3 t c, all into 4th ch st, forms 1 fan. Small fan is made of d c, large fan of d t c.

No. 18, Scallop, sc: make ch, then a row of sp, * 1 s c over 1st sp, ** skip 1 sp, 1 d t c, into next sp, 1 p, repeat ** until you have 9 d t c, all into the same sp, skip 1 sp, repeat *, for the length required.

No. 19, Block Stitch, bl: make ch, * skip 5 sts, 2 t c form a cl, 5 ch sts, 2 t c form a cl, 3 ch sts, repeat *, for the row, 12 ch sts, turn, catch into connecting st of 2 cls, 2 t c into 6th ch st, continue, 2 rows form 1 bl.

A SPENDING PLAN FOR THE HOME

To wisely apportion the family income so as to fully meet the needs of the members of the family is one of the great fundamental problems, upon the right solution of which depends much of the happiness and efficiency of the men and women of today.

The higher cost of all commodities is requiring the women of today to know values, to plan much more thoughtfully than ever before, to select more carefully and to use more wisely all the things purchased for the home.

To do this effectively it is necessary that she have an account book and keep an exact record of all moneys received and expenditures made so that she may know exactly how the money has been spent. Unless she knows just how much money has been expended and for what it has been spent, it is not possible to make a study of expenditures and readjust apportionments if too much or too little has been used for any one division of the household needs.

For ease in keeping records, household expenditures are grouped under six main headings: Food, clothing, operating expenses, property expenses, health and unclassified items, and the life of the home.

Spending for Food

That the woman administrator of the home may spend approximately the right amount for the different classes of food to meet the health needs of her family, the food group is sub-divided under the following headings: Meat and fish, eggs, milk and milk products (except butter), butter, fats other than butter, fruits and vegetables, grain products and other groceries.

The items under these headings are:

Meat.—Includes beef, veal, mutton, lamb, pork and poultry.

Fish.—Includes oysters, clams and fish of all kinds.

Milk and Egg Products (except butter). — Includes whole milk, cream, skimmilk, buttermilk and various kinds of cheese.

Butter.

Fats Other Than Butter.—Includes fat of meat, as suet, lard, etc., olive and other vegetable oils and fats.

Fruits and Vegetables.—Includes all fruits and vegetables used, either fresh, canned or dried.

Grain Products.—Includes flours and meals of all kinds; breads, rolls, etc., breakfast cereals, hominy and rice, macaroni and spaghetti, crackers.

Other Groceries.—Include all other foodstuffs not listed in any one of the other food groups, as coffee, sugar, spices, etc.

Clothing Expenditures

The items included in the other divisions of the classified list are as follows:

Clothing.—Textile fabrics for making garments at home; ready-made garments; hats and shoes; stockings, gloves, etc.; care, repair, cleansing and pressing of garments; dressmaking, milliners' and tailor's bills.

Operating Expenses

Operating Expenses.—House heat, light, ice, telephone, soap, laundry work if hired done, wages paid for work in the house, renovation, breakage and repairs.

Property Expenses.—This includes rent (if property is not owned); if owned, a sufficient amount for annual depreciation, taxes, interest, fire insurance, repairs, etc.

Health and Unclassified Items.—Include expense of doctor, nurse, medicine, dentist, stamps, stationery, and any other expenditures not included in preceding groups.

Life of the Home.—This group includes: (a) household furnishings; (b) investments; (c) recreation, education and religion, since these go to make up what may be called the satisfactions of life.

Under Household Furnishings include new furniture, table linen, bed clothes, rugs, curtains, etc.

Under investments include bonds, stocks, savings accounts, new buildings, fences, teling, and such permanent improvements, insurance (life and health), etc.

Under recreation, education and religion include: Church expenses and benevolences, gifts, vacations, travel, picnics, entertainments, lectures, books, magazines and papers, art, music.

In addition to the classified list of expenditures the account book should provide the following:

1. Columns to show the total receipts of the household and the sources of such receipts, whether from salary, interest on investments, rents from properties, or goods sold, as for example, the butter and egg money which the woman of the farm usually has for her own use.

2. A date column to indicate when moneys are received and expenditures made.

3. A column to record the amount and kind of articles purchased.

4. A column in which to place the value of articles purchased for the household, the term value having two interpretations:

(1) The cost of articles purchased at the store;

(2) the amount that would have been received if the articles had been sold from the farm.

The account book should also have a summary page to record the monthly totals from which the yearly total is made. This page may also provide a form to compare the actual expenditures as made for the year and the suggested apportionment of the income according to standards worked out by expert economists.

For this the woman has never kept accounts, the work for the first two or three months will reuire a considerable amount of time.(However, if a certain amount of time is allowed for this job each day the account can be taken care of without undue effort on the part of the woman of the home.

The work will bring its own reward. If expenditures are made according to a carefully worked out plan of spending the results will be very interesting to all the family, and you will find yourselves a larger share of the income for the "life of the home." This will make possible the broader and fuller life of the family group, because more of the things may be provided that contribute to the "durable satisfactions" of life.—Pearl MacDonald, Penna. State College.

MY SEWING BASKETS

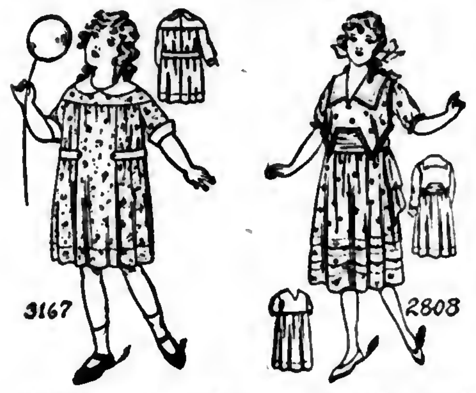
I have several of them made from peach baskets, as well as smaller ones. The large ones I have covered with fancy cretonne and the largest ones of these I have the outside cretonne longer at the top so as to allow for a draw-string which I twisted of green cord. These I can draw shut and set away. As we made the rounds in housecleaning we found materials to make use of "some time." There were the men's khaki pants. We cut out the backs of the worst of them and the best worn ones we put aside to patch for "emergency times." We cut out the best of the worn shirts using the tails to line the shoulders of new shirts; also to patch old shirts that are nearly worn out (looks better than new material on old). We also make stove cloths of them by sewing two pieces together then turning them and sewing criss-cross over them, making the cloth ten inches square, more or less as your fancy runs. We keep two or three on the stove to handle hot things.

But what about these baskets? Well, we live in a home built before closets were thought of. Upstairs we have managed to place closets in convenient places, but the many flues cause lots of chimney on the first floor, leaving no space available for closets. So other ways must be managed to keep things tidy. And this is where my baskets come handy—there is a basket for salt and feed bags and such odds which come handy for died fruit bags; bags for dish cloths, for every-day pillow cases. Large white phosphate bags make good aprons for bake day or wash day, thus saving our gingham ones.

In one bag I keep old canvas gloves. They come in very good when the weather is cold and the frost is on the chip pile. Sometimes our men do not find it above them to ask for a pair. Some of the old strong woolen stuff I make mittens of, too, for the men to wear when they work at the wood in winter.

In the large baskets I gather all sorts of sewing for "shut-in days." Most of the cretonne was chintz once used for window lambrequins. It had been washed and very nice yet, and will wear well. I lined the baskets with green denim.

My smallest basket is an ordinary sewing basket what I had left from recovering a couch. I lined it with cloth, put in a pin-cushion in one end, filled with dry coffee grounds. (Along the side I put a strip of cloth sewed on in loops to hold the thimbles and wax, and a strap on other side to hold scissors. My next largest basket is one which my mother used, and just as she used it, it now holds my "needy sewing" and stands on the shelf of my sewing machine with a nice cover over it and the machine when not in use. The other baskets I keep in convenient places, some of them in the garret and covered up to keep clean.—Mrs. Mary S. Shuman, Juniata Co., Pa.



2808.—A Dainty Dress.—This style lends itself nicely to combinations of material. The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. Size 8 requires $3\frac{1}{2}$ yards of 27-inch material for the dress and $\frac{3}{4}$ yard for bolero. Pattern, 10 cents.

3167.—Pretty Frock for Little Girl.—The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. Size 8 will require $3\frac{5}{8}$ yards of 27-inch material. Pattern, 10 cents.

HOME-MADE FLUFFY RUGS

The handsomest home-made rugs I ever saw were made from old ingrain carpet without any expense. They resembled the woven fluff rugs, but were much nicer. First, clean the carpet and if necessary wash it so all the dust will be removed, then ravel it out in long threads. Wind each color in a ball by itself.

Cut a piece of burlap or old ticking the size you wish the rug to be, allowing for a hem all around the piece.

Next make a flat frame of heavy pasteboard or light sticks about half an inch wide and two feet long. Place them three inches apart and fasten a crosspiece at each end to hold them together, as shown in the drawing. Wind the raveled yarn over and over this frame, putting the threads close together, till you have covered the entire length of the frame. Next stitch thru the center on the machine, using a long stitch and coarse thread; then cut the threads on the outside of each stick. This will make a fringed strip ready for the rug.

Make a quantity of these strips from each color you wish to use. Then begin at the center of the rug, lay a strip down on the foundation and stitch thru the center; this will fasten it on firmly. Press the fringe up with your hand, lay another strip close to the first one, and stitch that. Continue in this way till the rug is large enough.

Arrange the colors any way you like. If much of the material is a dull light color, dye it a rich shade to harmonize with the other colors. You will get the best effects by making several rows of each color. If you have a lot of odds and ends you can make the center hit or miss by winding them that way on the frame. When all the strips are sewed on, shake the rug out, then shear the surface to make it smooth. Hem the foundation over onto the under side and line with any old clothing material.

To ravel the carpet you can cut it in strips three inches wide then ravel from each edge till there are only a few threads left in the center, then sew them on the foundation. But this way takes more of them and as the threads are farther apart it does not make so nice a rug as the other way.

Another Rug

This rug is made from rags and small pieces of cloth that cannot be used for patchwork. It is made on a foundation the same as the one made from carpet. Cut the rags half an inch wide or less and in strips, then cut the strips in pieces about two inches long. Mark some lines on the foundation so as to get the rows straight, then lay a piece of cloth on the foundation and stitch thru it on the machine. Lay another piece adjoining it, and so on, making a row something as in the first rug. Then push the rags over and stitch another row close to the first one. You can go around and around the rug, beginning at the center, or back and forth according as you want the design in medallion effect or stripes.

When finished, shear the surface to make it even and hem the edges of foundation over onto the under side, as for the first described rug.

Both these rugs will stand hard wear, and making them will not strain the eyes like fine sewing. —Viola M. Lee, Broome Co., N. Y.

A PLAY-PEN FOR BABY

At about eight or nine months of age the baby should be put in a play-pen a part at least of the waking hours and allowed to crawl around in that and exercise his muscles. The play-pen may be kept clean and the baby is not gathering up dust from the floor and picking up things and putting them in its mouth. The mother may go on with her work, sure that baby cannot pull a table cover off the table, or get into mischief.

At about nine months if the baby is normal he will begin to pull himself up and use his legs. He will learn to walk in the pen, with no assistance. It is easier for him to learn to walk in the pen, holding to the solid sides than it is on the floor trying to hold on to movable chairs.

The pen may be moved from place to place. In nice weather it may be taken on the porch or out in the yard under the trees.

As for kinds of play-pens. There are several varieties manufactured, and all very nice—and, too, most of them beyond the farm mother as to price. If your husband is handy with tools (and most farmers of course are) he can make a pen that will look as nice as one which you can buy at a high price. That is, he can if he has time—a thing which farmers nowadays never seem to have.

I solved the problem in this way. I got a large drygoods box from the village store and put castors on the bottom. This raised it from the floor—our floors are very cold, and, too, this made it easy to move from place to place. My storebox play-pen has given as satisfactory service in every way as the one my neighbor has, for which she paid $25.

A play-pen is used such a comparatively short time that it behooves one to think before investing $25 in one. Some of them may be turned into beds, but even at that a real bed with the high sides seems more practical.

Do not let the price of a play-pen discourage you—our grocer gave me my box and it has been perfectly satisfactory. It is not a beautiful piece of furniture in the living-room, but the husky boy exercising in the pen attracts attention away from the box.—Mrs. G. H. Mumaw, Portage, Co., Ohio.

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Markets

PHILADELPHIA PRODUCE

July 19, 1920

Nearby N. J. and Penna. farmers are supplying nearly all kinds of fruits and vegetables, about the only exceptions being cantaloupes, pineapples, watermelons, oranges, a few potatoes and a very few peas.

Vegetables.—Green and wax beans are in moderate supply, of fair to ordinary quality, and low prices prevail, best selling around 50@60c per ⅝ bsk., with poor as low as 15@25c per ⅝ bsk. Beets have been very plentiful and the market has reached the low point of 2@3c bch. for best, and poor and small bchs. at 1@1½c. N. J. and Penna. grown cabbage has been so plentiful as to be almost a drug at 15@35c per ⅝ bsk. on N. J., and 50c@$125 bbl. on Penna. cabbage. Carrots have been plentiful. Good N. J. stock is now selling at $2@2.50 bus. hamper. Penna. cauliflower is seldom fancy so far this season and while the best sells around 20c head, most sales have ranged from 10@15c, with some poor down to 4@6c head. N. J. celery is plentiful and selling at 25@65c bch. as to size, with the celery hearts bringing from 6@10c bch. N. J. corn is in good demand when fency at $1.40@1.85 per ⅝ bsk. on white corn, with the sugar corn which is just making its appearance, bringing $2@2.25 per ⅝ bsk.

Some N. C. cucumbers were here today but they are not wanted on account of the very good N. J. cucumbers, which sold at $1@2 bsk., with some very fancy at $2.25@2.50. Del. and Md. stock here was neglected at $1.25 per hamper. The first N. J. egg plants have made their appearance and sold this morning at $4@4.50 per ⅝ bsk. N. Y. State is supplying practically all of the lettuce, but the supplies are too heavy and the low price of 25@75c box is not sufficient to pay the farmers for shipping it at this time. N. J. onions still continue very plentiful and dull at 40@55c per ⅝ bsk. for best, with poor onions lower. N. J. beans are appearing and sold this morning at $4@4.50 per ⅝ bsk. Three cars of N. Y. State peas sold at $2.25@2.50 per bus. There are still a few N. J. peas about but as the season is late for them, the N. Y. State peas are getting the preference as a general thing, altho there are a very few extra N. J. peas still coming which sell as high as $2 per ⅝ bsk., but most of the N. J. peas are of quality only good enough to sell at $1@1.75 bsk. N. J. supplying all the peppers, and while they reached the low point of 75c@$1 per ⅝ bsk. under lighter supplies, a little reaction has set in and prices today were firmer at $1.10@1.50 per ⅝ bsk.

Rhubarb is still on the market but meeting a slow demand at 2@4c bch. Romaine is doing a trifle better during the past few days but is still selling at the very low price of 50@75c box. White squash is very plentiful and unless fancy is not wanted, some poor selling as low as 15@25c per ⅝ bas., with best at 30@40c bas. The green Italian squash is like the white squash, only fancy meeting an active demand at 40@60c bas., with poor hard to sell at 20@25c bas. N. J. tomatoes are increasing in supply, but when fancy are bringing fine prices. Good second earlies sold this morning at $2@3 per ⅝ bas., while the best earlies sold at $1.50@2.25 bas. Some of the earlies are showing poor condition and some sales were made as low as $1 bas. this morning. No. 2 tomatoes are selling from 60c@$1.25 per ⅝ bas. as to quality and condition.

There were only five cars of Eastern Shore barrel potatoes here this morning and best brands sold at $9.50@$10 bbl., while the other stock sold from $7@9 bbl., some showing heated and rotted condition. N. J. potatoes are supplying most of the demand, and while last week's closing prices were $1.50@1.75 per ⅝ bas., this week, under lighter supplies and a firm demand, the market opened stronger and higher at $1.75@1.90 bsk. on primes, with No. 2s at $1@1.35 per ⅝ bsk. Both white and yellow turnips are meeting a very slow demand and movement at low prices, the whites selling at 25@40c per ⅝ bsk., and the yellows at 35@50c per ⅝ bsk.

Fresh Fruits.—About the only fruits that N. J. is not supplying at this time are cantaloupes and peaches, although she has started a few of her early peaches forward. The early varieties of N. J. peaches are bringing from $1@1.50 bsk. A few apples from Md. and Del. sold from 50c@$1.75 per hamper. Huckleberries are in good demand at 25@30c qt. Blackberries are about steady at 20@25c qt. Red raspberries are firm at 10@14c pt. and black raspberries are in light supply at 13@15c pt. Currants are meeting a good demand but they show a wide range in condition and sell all the way from 12@18c qt. Cherries are selling all the way from 10@25c qt., best being scarce, while the lower prices are for soft and water soaked cherries.

Poultry.—Live poultry is ruling steady to firm, with prices on fowls showing but little change, but spring chickens are lower. The range of values at the present writing is as follows: Heavy fancy fowls 39@41c; light to medium fowls, 35@37c; leghorn fowls, 34@35c; roosters, 24@26c; broilers, not Leghorns, 40@45c; Leghorn broilers, 40@45c; ducks, 28@30c; spring ducks 30@35c.

Eggs.—Eggs are showing very little change from day to day. Strictly fancy eggs free of heat defects, are very scarce and command a premium over prices quoted, while the eggs showing the heat defects are hard to move at the lower range of values. Eggs are selling at this writing at about the following range of values: Penna. and other nearby current receipts 48c; Penna. and other nearby firsts 50c; ordinary to fair nearby stock 45@47c; western firsts 46@48c; western extra firsts, 50c; western seconds and poorer 30@43c.

BALTIMORE PRODUCE

July 19, 1920

Butter.—Creamery Western Separator, extras, 60@61c; firsts 58@59c; do. prints, 1-lb. extras 61@62; firsts 58@60c; do. 1 lb. extras, 61@62c; firsts 58@60c; near by creamery, extras, 48@50c; firsts, 46@47c; dairy prints, Md., Penna. and Va. extras, 43@44c; firsts, 42@43c; store-packed, firsts, 43c.

Eggs.—W. Md., Penna. and nearby firsts, 43c; Eastern Shore, Md. and Va. firsts, 43c; Western (Ohio) firsts, 43c; W. Va. firsts, 42c; Southern (N. C.) firsts, 41c.

Live Poultry.—Chickens, spring, under 1¼ lbs., lb. 40c; do, 1¼ and 1½ lbs., lb. 42@45c; do, spring, 1¾ and 2 lb., lb. 45@48c; do old roosters, lb. 22c; do, old hens, over 4 lbs., lb. 38c; do, small, lb. 36@37c; do, white Leghorn hens, lb. 36@37c; do, young white Leghorns, 1½ lbs., lb. 45c; do, under 1½ lbs., lb. 40c. Ducks, Muscovy and mongrel, old, lb. 27@28c; do, white Pekins, young, lb., 38@40c; do, spring, 4 lbs. and over, lb., 35@40c; do, smaller, poor lb., 30@35c. Pigeons, old, pair, 45c; do young, pair, 45c.

NEW YORK PRODUCE

—July 17, 1920

Butter.—Firm; receipts, 10,904 tubs; creamery, higher than extras, 57@57½c, creamery, extras, 92 score, 56½c; creamery, firsts, 88 to 91 score, 52½@56c; packing stock, current make, No. 1, 42@43½c.

Eggs.—Firm; receipts, 16,706 cases; fresh gathered, extra firsts, 49@51c; fresh gathered, firsts, 45½@48c; state, Pennsylvania and nearby western hennery whites, firsts to extras, 53@56c; state, Pennsylvania and nearby western hennery browns, extras, 54@57c; state, Pennsylvania and nearby gathered browns and mixed colors, firsts to extras, 45@53½c.

Cheese.—Unsettled; receipts, 6324 boxes; state, whole milk, flats, current make, white and colored specials, 27½@28½c; do, average run, 26@27c; state, whole milk twins, current make, specials, 27@27¾c; do, average run, 26@26¾c.

Poultry.—Live and dressed stead; prices unchanged.

Vegetables.—Potatoes, L. I., bbl., $7.50@9; Jy., 165 lbs., $7@9; do, No. 2, $1.60@3. Beans, Jy., wax, 50c@$1.75 Jy., green, 50c@$1.50; Jy., Ital., 50c@$1.50; L. I., bag, 50c@$1.50. Beets, 100 bchs., $3@$5. Carrots, nearby, bsk., $2@3. Celery, state, bch., 25c@$1.25; Jy., bch., 20c@$1. Cucumbers, Jy., bsk., $1@2; Jy., doz., 50@75c; L. I., doz., 60c@$1. Corn, Jy., 100, $2@8. Cabbage, L. I., bbl., 50c@$1; Jy., bbl., 50c@$1. Lettuce, State, crate, 75c@$1.25; nearby, bbl., $1@2. Onions, Jy., wh., 75c@$1.25; yel., bsk., 75c@$1.25; nearby, 100 bunches, $1.50@3. Peas, bsk., $1.25@2.75; State, bag, $1@2; L. I., bag, 50c@$1.50; Jy., bsk., 50c@$1.50. Peppers, Jy., bsk., $2@2.25. Parsley, 100 bchs., $3@4. Radishes, nearby, 100 bchs., $1@3. Rhubarb, $2@4 per 100 bchs. Scallions, nearby, $1@1.50 100 bchs. Turnips, white, new, $1.25@2. Rutabaga, new, bbl., $1.75@2.50; bag, $1.50@2.25. Tomatoes, Jy., box, $2@2.50.

Fruit.—Apples, Jy., bsk., $1.75@2.50; poor, 25c@$1. Peaches, crate, Hiley, 50c@3; Carman, $1@2. Huckleberries, Pa., qt., 25@30c; Jy., qt., 25@35c. Blackberries, Jy., qt., 20@28c. Raspberries, red, pt., 10@17c; Black Cap, 10@13c. Gooseberries, qt., 17@20c; small, qt., 14@15c. Cherries, sour, qt., 14@18c. Currants, qt., 12@16c.

YORK PRODUCE MARKETS

July 19, 1920

The markets were largely attended with a much stronger tone than the preceding week. Altho there seemed to be a fairly good supply of all kinds of seasonable produce, yet the buying was brisk and little quibbling about the price. Cabbage and beans are the only two products that had to meet a falling market. Here the supplies were too heavy and a drop had to result.

Eggs.—48@50c doz.

Butter.—Country, 60@65c lb.; separator, 65@75c lb.; milk, 12c qt.

Poultry.—Hens, 30@32c lb.; dressed, $1@2.50 ea.; young, $1.10@1.40.

Vegetables.—Potatoes, 50@65c hf. pk.; seconds, 35@45c hf. pk.; much of the stock shows up scabby, and yields poorly. Lettuce, 2@5c hd.; cabbage, 4@12c hd.; beets, 5c bch.; onions, 5c bch.; radishes, 5c bch; asparagus, 10@12c bch.; peas, 20@25c quarter pk; beans, 10@15c hf. pk.; hams, sliced, 80@85c lb.; whole, 40@45c lb.

Fruit.—Apples, good stock, 15@20c box, 25c quarter pk; common, 10c box; cherries, 15@20c box; currants, 18@25c box; raspberries, 25@30c box; reds, 35@40c box; blackberries, 25@35c box; tomatoes, 5@10c each; 25@30c box; corn, 50c doz.

Retail Grain Market.—Wheat, $3; Corn, $2.25; Oats, $1.40; Rye, $2; Bran, $3.50 cwt.; Middlings, $4.10 cwt.

Wholesale Grain Market.—Wheat, $2.60; Corn, $1.80; Rye, $1.78; Oats, $1.15; Bran, $70 per ton; Middlings, $80 per ton.

PHILADELPHIA LIVESTOCK

July 19, 1920

Receipts for the week ending July 17, 1920, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Totals for week	1,289	7,969	8,994
Previous week	1,170	4,812	7,883

Calves.—Receipts of calves were 3,174 head against 1,974 head previous week.

Beef Cattle.—Quiet and steers and bulls a shade lower. Quotations: Steers, good to choice, $15@16.75; fair to good $13.75@15; common to fair, $11.50@13.50; cows dairy, good to choice, 8½@10c; do fair to good 7@8½c; bulls, 7@10½c; calves, extra to choice, $17.50@18; fair to good, $11@16; do, common, $11@13; Tennessee, $12@14; other southern, $6@10.

Sheep and Lambs.—In fair demand and values well maintained. Quotations: Sheared sheep, wethers, extra $10@10.50; do good to choice, $7.50@8.50; do, medium, $6@7; do common, $2@3.50; ewes heavy, fat $6@6.50; lambs, spring, choice, $17@17.50; medium $12@14, common $8@10.

Hogs.—Steady with offerings moderate and demand fair. Quotations: Best western, $19, good, nearby, $17@17.50.

City Dressed Stock.—Steers, heifers and cows quiet and barely steady. Other kinds firm, and hogs a shade higher. Quotations: Steers, 22@28c; heifers, 18@26c; cows, choice, 20@23c; cows, light, 12@20c; calves, city dressed, choice, 27@29c; calves, country dressed 24@26c; lambs, spring, choice, 33@35c; sheep, 14@23c; hogs, 25c.

LIVESTOCK MARKETS

LANCASTER

July 19, 1920

Cattle.—Receipts, 1710 head, against 1053 last Monday; market sluggish, but firm under increasing receipts; choice to prime steers, $1550@16.25; good to choice steers, $14@15.50; medium to good steers, $12.50@14; common to medium steers, $10@11.50; fair to good bulls, $11.50@13; medium bulls, $9.50@11; common to medium bulls, $7@9.50; heifers, $10.50@12; medium to good heifers, $10@10.50; common to medium heifers, $9.50@10; good to choice cows, $10@11.50; medium to good cows, $9.50@10; common to medium cows, $8.50@9.50; canners and cutters, $4@5; stock bulls, $8@9; good to choice calves, $16.50@18; medium, $15.50@16.50; common, $14@15.50.

Hogs.—Receipts, 135 head; market slow; prices lower; best grades, $16@17; light weights, $15@16; roughs, $11@12.

CHICAGO

July 17, 1920

Hogs.—Receipts, 5000; market, better grades, light and light butchers, 10c to 20c higher; other grades steady to higher; closing strong; bulk of sales, $13.85 to $16; top, $16.10; heavyweight, $14.50@15.80; medium weight, $15.35 to $16.10; light heavy, $14@15.75; heavy packing sows, smooth, $13.75@14.40; packing sows, rough, $13@13.75; pigs, $12.75@14.50.

Cattle.—Receipts, 2000; compared with week ago, good to best yearling steers about steady; grassers and strong to heavyweight corn feds, largely 25c to 60c lower; best she stock and canners, strong to 25c higher; others slow, steady; bologna and handy butcher bulls, mostly 50c higher; best stockers and feeders, 10c to 20c higher; others slow and uneven; veal calves, 25c to 50c higher.

Sheep.—Receipts, 7000; bulk receipts direct, few sales; native stock steady; top lambs, $15.50; compared with week ago, lambs about steady; yearlings and aged wethers are 75c to $1 higher; ewes, 50c to 75c higher; feeding and breeding stock steady to 25c higher.

EAST BUFFALO

—July 17, 1920

Cattle.—Receipts, 450; slow.

Calves.—Receipts, 350; $1 lower; $6@18.50.

Hogs.—Receipts, 3200; steady to 10c higher; heavy, $16@16.75; mixed, $17@17.15; yorkers, $17@17.25; light yorkers, $16@17; pigs, $16; roughs, $13; stags, $8@10.

Sheep and Lambs.—Receipts, 200; lambs, slow; lambs, $8@18; yearlings, $7@13.50; wethers, $9.50@10; ewes, $3@9; mixed sheep, $8.50@9.50.

NEW YORK

July 17, 1920

Cattle.—Receipts, 630; no trading.

Calves.—Receipts, 300; steady; veals, $15@19; culls, $12@14; skimmilk calves, $9@10.

Sheep and Lambs.—Receipts, 2700; steady; sheep (ewes), $6@9.25; culls, $3@4.50; yearlings, $10; lambs, $13@17.25; culls, $$1.

Hogs.—Receipts, 1600; steady; light to medium weights, $17.25; heavy hogs, $16.25@16.50; pigs, $16; roughs, $13.

PITTSBURGH

July 19, 1920

Cattle.—Steady; supply, 75 loads; choice prime, $15.25@16.

Sheep.—Higher; supply, 17 double-decks; prime wethers, $10@10.25; culls and common, $2@4. Lambs, $8@15.50. Veal calves, $17@17.50.

Hogs.—Higher; supply, 45 double-decks; prime heavies, $16.25@16.50; mediums and heavy Yorkers, $17.20@17.35; light Yorkers, $16@16.25. Pigs, $15@15.50; roughs,

PHILADELPHIA HAY AND GRAIN

—July 17, 1920

Baled Hay and Straw.—Receipts, 60 tons of hay and 1 car of straw. Quiet and prices favored buyers. We quote: Timothy hay, No. 1, none here; No. 2, $40@41; No. 3, $35@37; sample, $30@34; no grade, $25@29; clover-mixed hay, light mixed, $38@39; No. 1, mixed, $36@37; straw, No. 1 straight rye, $17@17.50; No. 2 do, $16@16.50; No. 1 tangled rye, $16@16.50; No. 2 do, $15@15.50; No. 1 wheat straw, $14.50@15; No. 2, do, $13.50@14; No. 1 oat straw, $14.50@15; No. 2, $13.50@14.

Bran.—Dull and barely steady. Car lots, including sacks, soft winter bran, western, in 100-lb. sacks, per ton, $59.50@60; spring bran, in 100-lb. sacks, per ton, $58@59.

Corn.—No. 2 Yellow, $1.80@1.85.

Wheat.—No. 1 red winter, $2.95@2.98; No. 2 do, $2.92@2.95; No. 3 do, $2.89@2.92; No. 4 do, $2.85@2.89; No. 5 do, $2.81@2.84.

Oats.—No. 1 White, $1.29@1.30; No. 2 do, $1.28@1.29; No. 3 do, $1.24@1.25; No. 4 do, $1.22@1.23.

NEW YORK HAY AND GRAIN

—July 17, 1920

Feed.—The market for mill feed was quiet and prices were again irregular. Red dog was scarce and firm, while bran seemed to be plentiful and easy.

Quotations: City feed bran, $60; middlings, $62, in 100-lb. sacks; red dog, $79, nominal, in 100-lb. sacks; Western spring bran, $55.50; standard middlings $62; flour middlings, $68; red dog, $77, all in 100-lb. sacks, 30-day shipment. Oat feed, $42; rye middlings, $58; white hominy feed, $75, all in 100-lb. sacks. Cottonseed oil meal, $72; linseed oil meal, $66, in 100-lb. sacks.

Hay and Straw.—While values have shown no improvement and there is still an oversupply at most harbor points, new invoices are running somewhat light and it appears to be the general opinion in the trade that the market has passed the worst of the slump.

Hay.—Large bales, Timothy, No. 1, $44@46; No. 2, $38@44; No. 3, $32@37; Shipping, $29@31; No grade, $18@23. Clover, mixed, fancy, $39@44; No. 1, $32@37; No. 2, $28@31.

Straw.—Large bales, No. 1, rye, $18@19; No. 1 oat, $15@16.

PHILADELPHIA DAIRY MARKET

—July 17, 1920

Butter.—Receipts, 3091 tubs. As usual on Saturday there was little disposition to trade in a wholesale way and the market was nominally unchanged. Quote: Fresh, solid-packed creamery, high-scoring goods, 58½@60½, the latter for jobbing sales; extras, 57½c; do, extra firsts, 55½@56½c; firsts, 51@55c; seconds, 45@50c; sweet creamery, choice to fancy, 59½@61½c; fair to good, 51@58½c; ladle-packed, as to quality, 44@46c; packing stock, 38@41c; fancy brands of nearby prints were jobbing at 65@68c; good to choice, 58@65c; fair, 55@57c.

Cheese.—Steady but quiet. New York, whole milk, current make, fancy flats, 27½@28c; common to fair, 24@27c; Longhorns, 27½@28c; single Daisies, 27½@28½c; jobbing sales of fancy goods, 29@30c.

NEW YORK MILK MARKET

July 19, 1920

Business has been very brisk in all parts of the city and surplus fast disappearing. Warm days and nights have stimulated the ice cream trade, which is partly responsible for the increased demand. The July rate in 200-mile zone for 3 percent milk is $2.95 per 100 lbs.; add 4c per 100 lbs. for each additional one-tenth of 1 percent butter fat.

Receipts of milk and cream in 40-qt. cans for the week ending July 17, 1920, were as follows:

Railroad	Milk	Cream
Erie	39,112	5,046
Susquehanna	7,622	115
West Shore	12,424	2,516
Lackawanna	52,715	2,845
N. Y. Central (long haul)	189,023	6,206
Ontario	42,440	2,275
Lehigh Valley	60,434	2,955
New Haven	6,250	65
Pennsylvania	12,106	532
Other Sources	5,000	200
Totals	427,126	22,755
Same week last year	409,763	20,407

TOBACCO MARKET

—July 17, 1920

The week was characterized by a continued demand for tobacco now held by local packers and offered mainly to manufacturers. Several sales were reported, including prominently that of 500 cases sold to the Imperial Tobacco Company of London. Prices were not made public but it is known that same were such as to give satisfaction to sellers who otherwise would not have sold. It now seems evident that the residue of previous crops will be well out of the way before the product of the present year is ready, and that accordingly there will be a ready and waiting demand for the latter. All indications point to good prices for the new crop when ready, but growers should not overlook the fact that results rest largely with themselves in the proper attention to many details contributing to the production of desirable tobacco. No matter how favorable prices may be those who are careless and neglectful cannot expect maximum or even moderately profitable results.

Growing conditions continued favorable and the new crop is now launched and fairly under way. Cultivation is in order at present and with the same made practical by so many favorable showers the growing crop will rush rapidly on toward maturity. In other sections, too, the outlook is reported as favorable with plenty of rain and excellent growing weather. Insects, especially common tobacco worms, have been quite numerous and thus bothersome in some localities. Where the same cannot be controlled by hand picking the use of Paris green will be found very helpful and practical. The same may be applied at the rate of one pound per acre, using ashes or air-slaked lime to give bulk in applying.

APPLE PROSPECTS IN NEW YORK

Baldwins, which are the leading commercial variety of apples in New York, have only a very light crop, but most other varieties of fall and winter apples and nearly all varieties of pears are expected to yield well not only in the several fruit belts, but in the many small orchards scattered over other portions of the State. Although the apple crop is not exceptionally heavy in any of the more important fruit counties, the unusually even distribution causes the commercial apple crop of the State to be now estimated at 6,737,000 barrels. Last year less than three million barrels were marketed and the big crop of 1918 amounted to less than six million barrels. These figures do not include apples canned, dried, made into cider, consumed on the farms where grown or sold in bulk on local markets. The total crop of the State will this year be nearly a fifth of the apple crop of the country, which is now estimated at 200 million bushels.

INTERSTATE MILK PRICES

—July 17, 1920

The basic price for 3 percent milk within 10 miles of Philadelphia is $3.28 per 100 lbs. and 1 cent per 100 less for each 10 miles distant. Four cents per 100 lbs. is paid for each one-tenth of 1 percent fat above 3 percent. These are prices for the basic quantity or less. The price for amount exceeding of basic quantity is on the basis of 6.6c for 3 percent milk.

TOLEDO CLOVERSEED

July 19, 1920

Cloverseed.—Prime, cash, $24; October, $24.15; December, $23.10.

Alsike. — Prime, cash, $23; October, $23.25; December $23.50.

Timothy.—Prime, cash, 1917, $5.40; 1918, $5.40; 1919, $5.50; September, $5.75; October, $5.60; December $5.60; [illegible] $5.77.

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PENNSYLVANIA FARMER
261 S. Third Street Philadelphia, Pa.

FARM BUREAU FEDERATION IN PENNA. NOW IN SIGHT

The actual formation of the Pennsylvania Farm Bureau Federation is now up to the individual county organizations, for the matter will be brought to their attention in concrete form and for their separate consideration. For the first time the organization has assumed a definite outlook after much discussion on the part of the many farm bureaus, and it is possible that it may take definite form within a year, or less.

The federation question held the entire attention of the farm bureau executive committeemen in their meeting at the Pennsylvania State College during Farmers' Week, and the committee appointed with A. B. Shenk, of Hershey, as chairman, is already formulating plans for the organization. Sentiment was secured on the matter of paid membership at this meeting, showing that most of the farm bureaus were undecided and awaiting further information on the subject. This will be supplied in the reports of the committee which will be presented to individual bureaus before the group conferences are held in the fall. Most of the bureaus that were undecided were inclined to favor federation, and when its advantages are shown in a clearer light little difficulty is anticipated in completing the organization.

The committee on organization also includes W. S. Wise, of Crawford County; Clayton Brubaker, Lancaster; Lyman Smith, Erie; R. L. Munce, Washington, and Verne Struble, Bradford. They will work with an advisory committee made up of Fred Rasmussen, secretary of agriculture; Dean R. L. Watts, State College School of Agriculture; M. S. McDowell, director of agricultural extension; E. K. Hibshman and F. P. Weaver, of the extension department.

SAVE THE WHEAT

The world's food supply is short, probably shorter than ever before known in the world's history. Therefore every grain of wheat must be saved for food.

An annual loss of at least $1,000,000 in Pennsylvania is caused by the Angoumois grain moth. Help us to prevent this enormous loss this year when many mouths are crying from hunger and it is estimated that 1,000,000 people may starve before the crops of next year are harvested.

The wheat is infested while growing and the second brood is present in the stacked wheat awaiting the thresher. Prevent loss by threshing the grain immediately after harvesting and place it in a tight bin and fumigate with carbon bisulphide, using it at the rate of one pound (pint) to 100 bushes of grain. Keep away lights or fire, explosion.

LEGUMINOUS HAY ACREAGE PREDOMINATES

Alfalfa now has an acreage greater than that of any other legume or grass cut for hay, not growing in combination with another. Of the total tame hay acreage in 1919 alfalfa occupied 21.1 percent, timothy and clover mixed 18.2 percent, timothy 15.9 percent, clover 12.3 percent, pea 8.7 percent, grain cut green 7.7 percent, and all others 16.1 percent. If the acreage of the timothy and clover mixture is equally divided between those two plants, the timothy acreage becomes 25 percent of the total of tame hay acreage, and clover 21.4 percent, so that timothy is still the leading hay plant.

NEW YORK FARMERS' WEEK

(Continued from Page 3.)

is made. Too cheap prices in the fall when the crop was short led to freer consumption than conditions warranted, and those who were wise enough to hold their crops—and they were too few—secured the prices that a really big shortage commanded. He thinks all farm prices, unless perhaps wheat, will remain high for two or three years yet. Dairy cows and dairy products will be more profitable for the next five years than for the past five years. He thinks it a good time to buy a farm if the buyer knows real value and can get a long period for payment.

He deplored the wool situation and thought it probable that many sheep owners may sell their herds at prices lower than their real value. He says horses are at the lowest value now, relatively, of any farm product. At that, present low prices cannot continue long. Lumber prices are due to take a real drop about next summer, he thinks.—M. G. F.

NEW YORK FAIRS

Town and County	Date
Whitney Point, Broome Co.	Aug. 10-13
DeRuyter, Madison Co.	Aug. 10-13
Caledonia, Livingston Co.	Aug. 11-14
Cortland, Cortland Co.	Aug. 16-19
Cairo, Green Co.	Aug. 17-19
Perry, Wyoming Co.	Aug. 17-19
Middletown, Orange Co.	Aug. 17-20
Sandy Creek, Oswego Co.	Aug. 17-20
Gouverneur, St. Lawrence Co.	Aug. 17-20
Warrensburg, Warren Co.	Aug. 17-20
Cambridge, Washington Co.	Aug. 17-20
Norwich, Chenango Co.	Aug. 24-27
Westport, Essex Co.	Aug. 24-27
Canton, St. Lawrence Co.	Aug. 24-27
Trumansburg, Tompkins Co.	Aug. 24-27
Ellenville, Ulster Co.	Aug. 24-27
Hudson Falls, Washington Co.	Aug. 24-27
Warsaw, Wyoming Co.	Aug. 24-27
Ballston Spa, Saratoga Co.	Aug. 29-S. 3
Walton, Delaware Co.	Aug. 31-S. 3
Lowville, Lewis Co.	Aug. 31-S. 3
Rome, Oneida Co.	Aug. 31-S. 3
Fulton, Oswego Co.	Aug. 31-S. 3
Ogdensburg, St. Lawrence Co.	Aug. 31-S. 3
Hornell, Steuben Co.	Aug. 31-S. 3
Monticello, Sullivan Co.	Aug. 31-S. 3
Ithaca, Tompkins Co.	Aug. 31-S. 3
Penn Yan, Yates Co.	Aug. 31-S. 3
Johnstown, Fulton Co.	Sept. 1-4
Brockport, Monroe Co.	Sept. 1-4
Herkimer, Herkimer Co.	Sept. 6-8
Delhi, Delaware Co.	Sept. 6-9
Brookfield, Madison Co.	Sept. 6-9
Fonda, Montgomery Co.	Sept. 6-9
Little Valley, Cattaraugus Co.	Sept. 6-10
Plattsburg, Clinton Co.	Sept. 6-10
Boonville, Oneida Co.	Sept. 6-10
Rochester, Monroe Co.	Sept. 6-11
Rhinebeck, Dutchess Co.	Sept. 7-10
Watertown, Jefferson Co.	Sept. 7-10
Cooperstown, Otsego Co.	Sept. 7-10
Troupsburg, Steuben Co.	Sept. 7-10
Owego, Tioga Co.	Sept. 7-10
Naples, Ontario Co.	Sept. 8-10
Albion, Orleans Co.	Sept. 8-11
Chatham, Columbia Co.	Sept. 8-11
Dunkirk-Fredonia, Chautauqua Co.	Sept. 13-17
Syracuse, Onondaga Co.	Sept. 13-18
Watkins, Schuyler Co.	Sept. 14-16
Cuba, Allegany Co.	Sept. 14-17
Afton, Chenango Co.	Sept. 14-17
Malone, Franklin Co.	Sept. 14-17
Cape Vincent, Jefferson Co.	Sept. 14-17
Avon, Livingston Co.	Sept. 14-17
Nassau, Rensselaer Co.	Sept. 14-17
Riverhead, Suffolk Co.	Sept. 14-17
Canandaigua, Ontario Co.	Sept. 16-18
Oneonta, Otsego Co.	Sept. 20-24
Altamont, Albany Co.	Sept. 21-23
Potsdam, St. Lawrence Co.	Sept. 21-23
Waterloo, Seneca Co.	Sept. 21-23
Angelica, Allegany Co.	Sept. 21-24
Batavia, Genesee Co.	Sept. 21-25
Mineola, Queens Co.	Sept. 21-25
Vernon, Oneida Co.	Sept. 23-25
Palmyra, Wayne Co.	Sept. 23-25
Richfield Springs, Otsego Co.	Sept. 27-30
Cobleskill, Schoharie Co.	Sept. 27-O. 1
Hamburg, Erie Co.	Sept. 27-O. 2
Bath, Steuben Co.	Sept. 28-O. 1
Wellsville, Allegany Co.	Sept. 28-O. 1
Binghamton, Broome Co.	Sept. 28-O. 1
Hemlock, Livingston Co.	Sept. 29-O. 2
Elmira, Chemung Co.	Oct. 5-8
Morris, Otsego Co.	Oct. 5-8
Dundee, Yates Co.	Oct. 12-14
New York, New York Co.	Nov. 3-5
Annual Convention, Albany	Jan. 20, 1921

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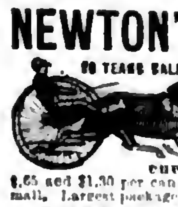

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40 head, free of tuberculosis, bull calves for sale.
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SHEEP PARASITES FROM DOGS

The following is taken from an article by Dr. A. S. Alexander in the January number of the "American Sheep Breeder and Wool Grower," entitled "Two Sides to the Dog Question":

"The dog is often a beast of prey, to be sure, but we must remember that he is also the carrier of many of the worst parasites of the sheep, and for this reason his case should be attended to quite as carefully as those of infected lambs and adult sheep.

"There are at least four parasites common to dogs and sheep alike, viz: taenia marginata, taenia coenurus, taenia echinococcus and lingautula toenoides. According to Curtice, the last is rare and in justice to the dog should not be used against him, although it may subsequently afford as the other species. Dogs harbor the adults of the other parasites named and scatter the eggs upon the pastures for the infection of sheep. Thus the dog harboring one or more is a constant menace to the health and lives of the flocks in the neighborhood. Nor is this all, for man himself can be infested by at least two of these species—taenia echinococcus and taenia marginata—in their cystic. The former of these species produce a disease of slow development, but one which is nearly fatal in its results. To prevent these diseases the sheep dog must be annually treated for worms with suitable worm medicines, and great care should also be taken that they are not allowed to eat the heads of sheep which have died of "sturdy" or "gid," as it is called.

"There are reports, too, that the sheep can be infected by parasites from some of the wild animals that still haunt the land where they were once numerous. The examination of these little quadrupeds to ascertain the parasites they contain has not been as extensive as it should be, but so far as it has extended it is safe to say that sheep are not infected from rabbits, squirrels, skunks, woodchucks, gophers, prairie dogs and foxes. Foxes may harbor some of the adult taeniae, whose cystic stages infest the sheep, but unless they can obtain the young forms of the parasites by eating the intestines of the sheep they would be very unlikely to be infested with adults. It is also reported that rabbits harbor the cystic form of taenia marginate, but this statement has not been corroborated, as the rabbits examined contained the cysts of taenia serrata. If rabbits should be proved to harbor the cysts of taenia marginata, then the danger would rise not from them, but from hunting dogs which eat the rabbits and the cysts they contain and harbor the parasites that alone are the source of danger. The possibility of infection from deer is too small to be considered as an economic question.

"In short, the dog is a far more common and bad source of sheep parasites than any of the other animals, even although it has been found that Angora goats harbor the stomach worm common to lambs; and we would, therefore, advise our readers to see to it that the farm dog, where sheep are kept, is given his annual dose of worm destroyer and tape-worm expeller. This is a "cleaning" that is as important to the sheep breeder as any other operation of the farm if he but sees it in the light we have thrown upon the subject in the above remarks. It is more important than trying to purify the human blood by the many nostrums which are sold under the name of "spring medicine."

FLOATING HORSES' TEETH

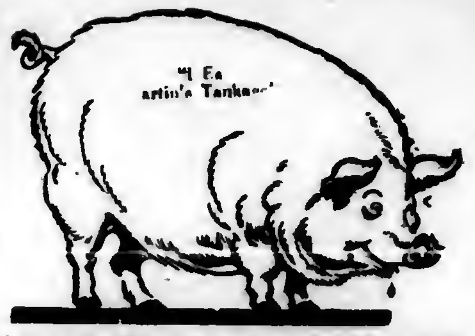
Anything that will save a little horse feed when oats are selling for $1.05 and corn for $2.10 is well worth considering. If there was no other reason for taking care of a horse's teeth this would be enough, I believe. The cost of having a horse's mouth looked after by a competent veterinary here is a dollar. The cost of the feed that can easily pass through a horse's digestive tract untouched will reach that amount many times during a season. If teeth are in such shape that we can see the whole grain passing through an animal then certainly much of the grain that we cannot see is not thoroly digested and there is an additional loss.

Sometimes a tooth will break off or come out entirely so that the tooth that meets it has nothing to wear it down during the chewing act. This allows the space in the jaw to become filled with feed sometimes and starts something. Maybe the long tooth will come down far enough to strike the gum on the opposite side and hurt enough to keep the horse from chewing hard on anything. Sometimes the teeth do not quite meet in regular chewing and a little ridge is left along one edge of the jaw. This is sharp and the cheek is irritated by the edges. This may cause slobbering and finally even worse trouble. All these things have happened to my knowledge. I had one horse that slobbered so much after pasture started that we didn't know what could be the trouble. It was a bad set of teeth, but several men told me that it was because he had been eating some kind of clove and this caused the trouble.

I have in mind a rather young mare owned by a neighbor two years ago. She was thin and didn't shed well. It looked as if she would die. The owner finally tried a veterinary who took care of her teeth. In a few weeks I wouldn't have known her for the same horse if I hadn't lived next farm to farm she worked.

I have had my own team looked after every year so far. Usually there is something to take care of each time though in many cases a horse can go two or three years without attention. The cost is light and I feel the saving in comfort for the horse and in feed is well worth while.

If you have a horse that is not doing well it will pay to drive him to a veterinary for examination. If he is all right a good "vet" will tell you and it costs nothing, but if not, you will find a better horse on your hands for the pains. Usually it is the older horses that have the teeth trouble. Yet there are times when younger ones will have something wrong.—Earl Rogers.



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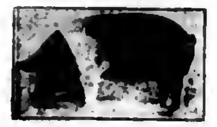

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Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Thoropin.—Will you tell me how to treat a case of thoropin and the cause of same? My horse is not lame. G. A. S., Phila., Pa.—The causes are both hereditary and exciting. If sire and dam suffer from puffy hocks the offspring are inclined to suffer from bog spavin or thoropin; besides heavy hauling and fast driving have a tendency to produce it. In such cases as yours it is good practice to do nothing until the animal shows lameness, then give rest and apply a blister every two weeks.

Indigestion.—I have a 2-year-old heifer due to freshen soon, that shows symptoms of blind staggers; she also wabbles when walking and is inclined to fall. L. S., Tyrone, Pa.—Her bowels should be kept open, her stomach should not be overloaded; also give her a teaspoonful of hyposulfite of soda in one quart of water three times a day for few days. If her bowels are costive give Epsom salts.

Lumpy Jaw.—I have a cow that has large bunch in throat, near angle of jaw, which is quite hard. The other bunches softened, I opened them, plenty of pus came out, but this large, flat bunch remains. G. E. B., Flemington, N. J.—Clip off hair and apply one part red iodide of mercury and four parts fresh lard to bunch every 12 days. Give one dram doses of potassium iodide in either feed or water twice a day. Painting such bunches with tincture of iodine is considered good treatment. Surgical removal is preferable to all other treatment, but this is work for the skillful veterinarian.

Bacterial Dysentery.—I have had three 2-year-old heifers freshen. Their calves seemed all right when born but on third and fourth day died. Bowels are very loose, but this is not white scours. I have other cows due to freshen soon and, of course, am anxious to save the calves. C. E. B., Angelica, N. Y.—Scours in calves is much more easily prevented than cured. You must clean and thoroly disinfect your cow and calf stable in order to destroy the infection which is causing the death of your calves. The cow should calve in a clean stable, the navel of calf should be washed clean, then paint stump of cord with tincture of iodine and then apply one part iodoform and nine parts boric acid. Immediately after birth give each calf a dose of white scour vaccine; also give five-grain doses of salol three times a day, if the bowels are too active. The cow's udder should be cleaned before the calf is allowed to such. Sprinkling powdred lime on floor and washing walls with fresh limewash will check this infection.

Paralysis.—I have a hog that is in bad shape, having lost the use of hind quarters, but has good appetite. E. C., Hammonton, N. J.—He is incurable, but his flesh is doubtless fit for food.

Warts on Teats.—Have a cow troubled with warts on teats. J. W. H., Roanoke, Va.—If you are milking her, apply olive oil freely after each milking. If dry apply castor oil daily. Why don't you clip off those with neck?

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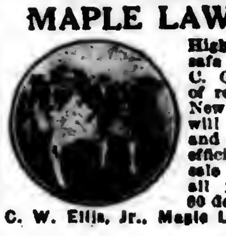

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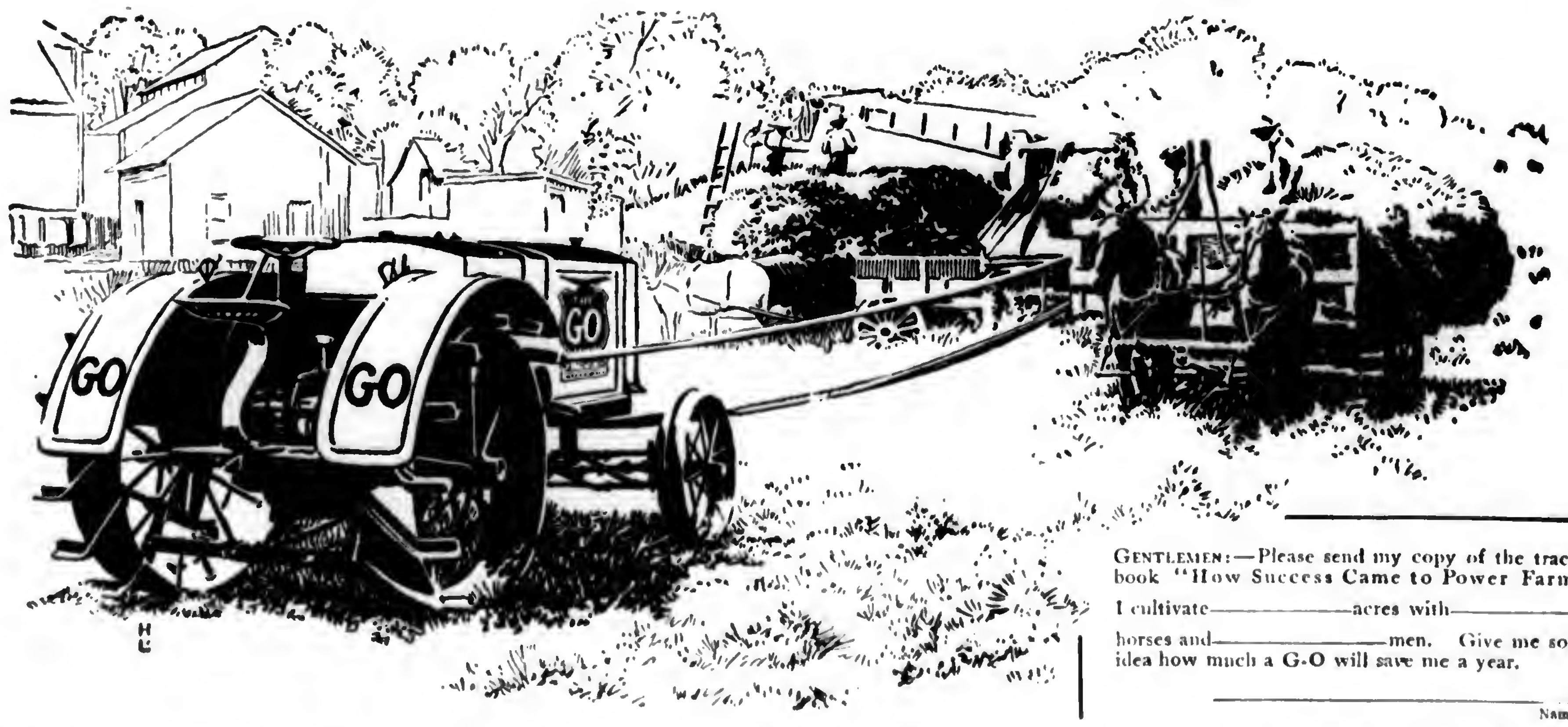

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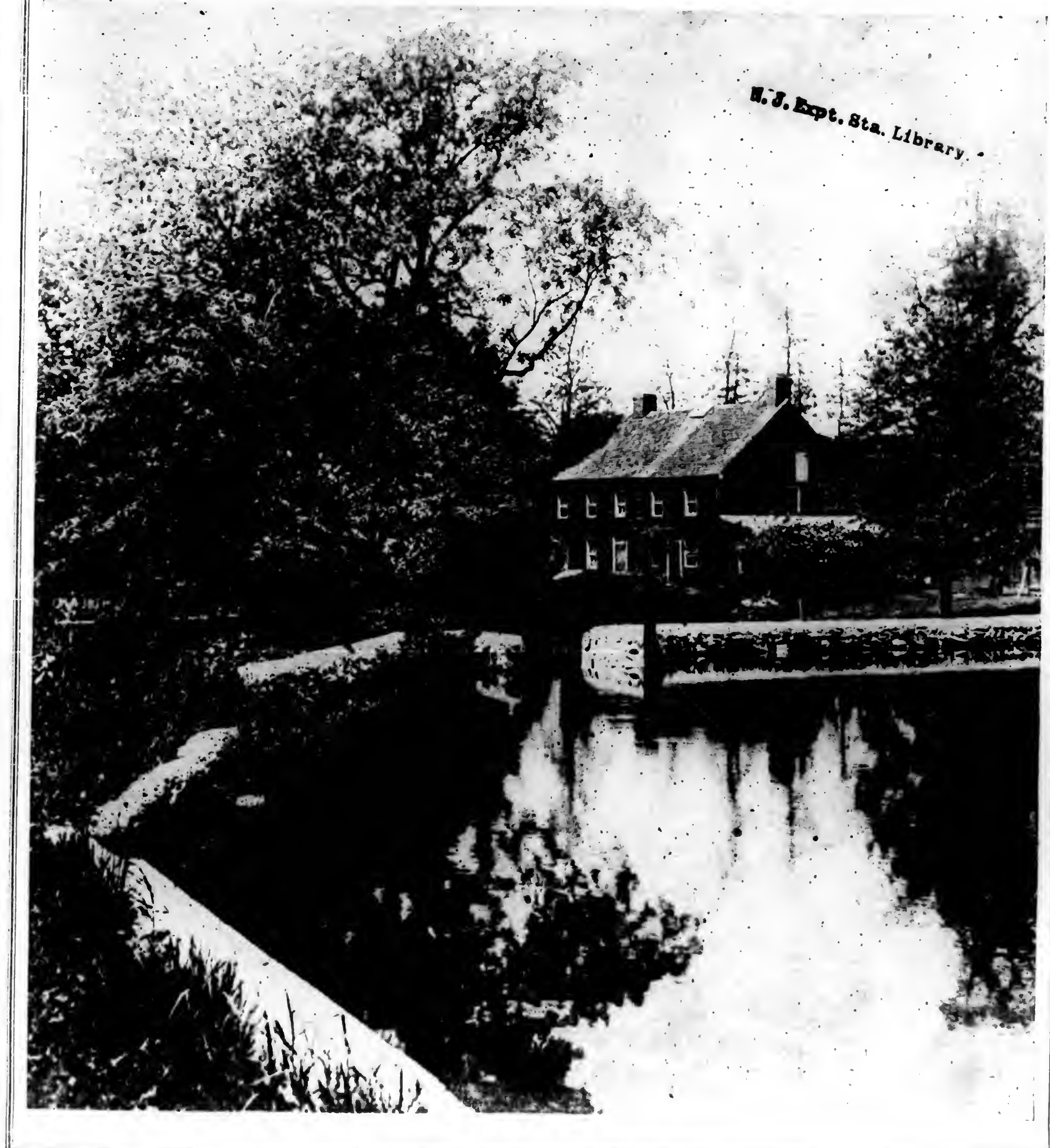

Farm and Home Improvements

A Much Improved Home

By Mary S. Kintigh, Westmoreland, Co. Pa

We have added a hot-water heating system, a bathroom with hot and cold water, and electric lights to our home, which add beauty, comfort and convenience.

The hot-water heating system was put in when the house was built and heats the house all well, making it comfortable. It saves carrying of coal and dirt and dust through the house. The dirt and dust are all confined to the furnace room in the cellar.

The bathroom is a much enjoyed comfort and convenience.

Although the bathroom requires frequent cleaning of fixtures and of the room itself, we would not want to do without it.

The hot and cold water in the kitchen save time and strength. We have a sink with drainboards for dishwashing and all cooking and kitchen work. At another side of the kitchen there is a lavatory for the men to wash in at meal or other times and for all handwashing and so on.

Every kitchen in country or city should be equipped with a separate place for hand washing for the convenience of the men folks when they come in for their meals from the fields or shops for sanitary reasons, as well as saving of the bathroom.

The electric light plant adds beauty, comfort and convenience. We run our engine with kerosene, using just the same amount to run it for one year as we used in the lamps and lanterns before getting the electric lights.

The same amount of kerosene gives us much brighter lights, more of them and power enough to run our washing machine, churn, electric cleaner and a lot of other things in addition to the lights. The fuel can is filled with kerosene, a lever pressed down, the priming cup filled with gasoline and the engine starts off, and when the battery is fully charged the engine stops of its own accord. The electricity stored in the battery provides lights in the house from cellar to attic, in the wash-house, implement shed, barn and hog pen, and will be run to the garage.

We have a portable motor which can be carried about and used to run washing machine, churn or any other machine that may be in another room or building.

We have an electric iron. The iron uses more current than any other of the appliances. Our electric cleaner uses very little current. It is made of pure aluminum and weighs only 10 pounds. It is easy to carry about and does good work. The brush in the cleaner operates with the wheels. It is not motor-driven, as is the brush in some cleaners. The motor-driven brushes are hard on the carpet and rugs. The brush is driven with so much power that it removes too much of the nap of the carpet, wearing it much more than a wheel-driven brush. Our cleaner is so constructed that it never is to be oiled, a feature I like very much.

The electricity provides for us two valuable therapeutic appliances—a vibrator and a therapeutic lamp. The lamp I wired and made up myself at a very moderate expense. I procured a 150-watt lamp, five feet of cord, socket, plug, shade holder and a deep cone-shaped tin shade and wired it up. It can be attached to any light fixture in the house. It is a very penetrating, healing, even heat for the relief of coughs, sore throat, earache or other aches and pains. A half hour under the rays of this light brings much relief. The electric vibrator is also a valuable aid in the relief of many ills, and uses very little current to operate.

When having our house wired we were advised to have sidewall switches upstairs. We wisely took the advice and have side-wall switches in all rooms upstairs as well as downstairs. Sidewall lights near the dressers are used upstairs, while ceiling lights are mostly used downstairs. A side-light was placed above the sewing machine for night work. A ide-light lights the kitchen sink and a ceiling light lights the kitchen in general, giving a good light above the kitchen range.

Three-way switches are used in several places so light may be turned off and on from different points. One is used at the house to turn on a light on a pole midway between the house and barn and on getting to the barn it can be turned off there, or the reverse. The same plan is used in the halls and at the barn.

I also bought some wire plugs and sockets and wired up some home-made apparatus to use for developing and printing pictures, which adds a great deal to my equipment in home photography, as well as having much more effective light to work by. A home-made egg tester is also lighted with an electric light.

The last I shall mention, but not the least of our home conveniences, is our steam pressure canner. It takes just as much work to prepare the fruits, vegetables or meats to can as any other method of sterilizing, but it saves time and fuel, as it requires a much shorter period of cooking to properly sterilize the product being canned than the wash boiler method.

This Farmer Says His Tractor Is Satisfactory and Economical

The New Jersey State Horticultural Society now has a membership of 500, the number set as a goal for the first year under paid membership. The next drive will be for one thousand members and the membership committee hopes to reach this within three years. Considering tho number of fruit and vegetable growers in the State and the value of membership, this should be an easy task.

Home Heated

Mrs. C. H. Rea, Jefferson Co. Pa.

The other evening as my husband sat reading the "Pennsylvania Farmer" he turned to me and said, "You might write an article in answer to Special Articles Wanted.'" I replied, "What would I write about?" "Why about our furnace, to be sure," he replied.

I did not think much about it at the time for I am a busy farmer's wife, doing all my own work and most of the sewing for myself and five children. But one cold stormy day I looked across the field to my next neighbor's and saw smoke rising from the wash-house chimney and soon I heard the thud of a gasoline engine.

About 2 p. m. I saw her hanging clothes upon the line and they were freezing as she hung them up. I wondered how she could do it, for I knew she had a young baby andanother child not yet walking which she must leave in the house. Beside these children she had two little boys all under six years of age.

Back and forth she went from the house to the wash-house, not only exposing herself to the cold, but worrying continually about the children in her absence. She told me afterwards that she was sick in bed for a couple days and I said to her, "If you only had a furnace in your big house you could hang the clothes in the garret to dry."

For years I did just what she is doing and suffered for it. Now we have a furnace in the house and during cold or stormy weather I hang my clothes in the garert.

We have a second-hand cookstove in the basement where I heat the water and do the washing after the children come from school. I am not able to turn the washer and often I hang the clothes in the garret by lantern light.

We can wash in the basement in the coldest weather without taking cold, as the heat from the furnace and cook stove furnish plenty of heat. I think this far better than washing in a hot kitchen or going outside to a wash-house.

But this is not the only advantage of having a furnace. I consider the care of a furnace far less work than the care of coal stoves and the temperature in all the rooms is uniform and more healthful. If one is compelled to leave the house and children you feel that there is no danger from fire. I want to say right here that I never do leave small children alone if I can possibly avoid it. Then, when we all go away and return home we find it a great comfort.

Now I want to say that there are many houses so built that it would be hard to have heater pipes running upstairs, but don't let that worry you. We don't have them upstairs either. We have one pipe entering the hall at the foot of the stairs and a double chimney reaching as far as the hall upstairs, furnishes heat. A pipe from the furnace opens into this part of the double chimney and thus we have hot air in our hall

(Continued on Page Four.)

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What Shall the Harvest Be?

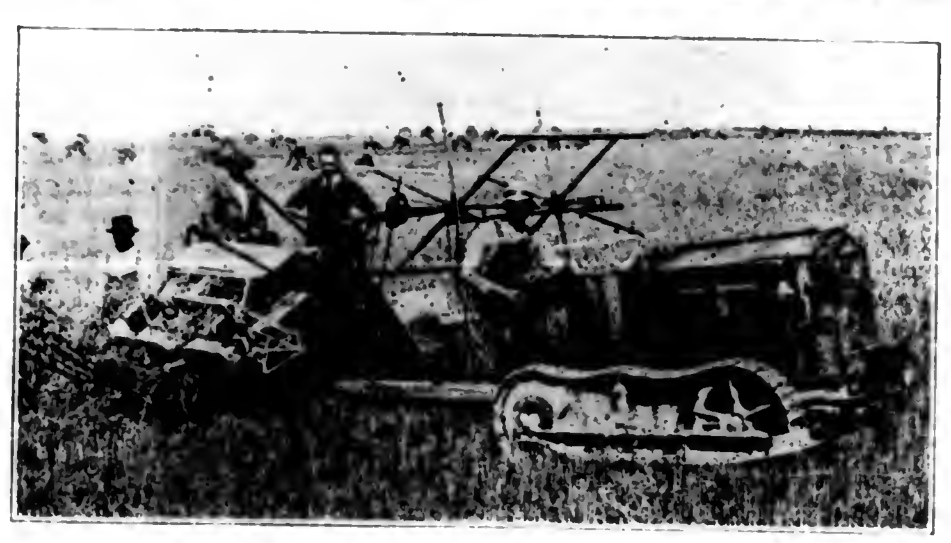
A Review of the Conditions and Prospects in the Wheat Market.

While commodity markets in general give strong indication of having entered a permanently downward level of prices, wheat furnishes a remarkable exception for the producers of the United States. The new wheat crop year has already opened with quotations at the highest level in history for this season, current sales showing an advance of as much as 65 cents a bushel over a year ago. The dollar-a-bushel market of old will certainly not return on the present crop; in fact, a study of world supply conditions points to the possibility of a price level above the highest figures already recorded in the annals of the trade. A rise to a price of $4 a bushel before the new crop year passes out will not surprise many close observers of wheat markets of the world. Some are even forecasting a $5 market.

It is gratifying to find so brilliant a price outlet for wheat in face of the fact that the United States promises to harvest a total crop above the average of recent years. The winter wheat crop of the country is estimated at 518,000,000 bushels, which is practically assured. The probable spring wheat yield is placed at 291,000,000 bushels, making a total for the United States of 809,000,000 bushels. However, the spring wheat plant is just entering its critical stages of growth. The crop might deteriorate sharply, or, on the other hand, make a larger yield than the present prospect.

In addition to the indicated crop of 809,000,000 bushels, the Department of Agriculture estimates the stocks on farms of the country at 47,756,000 bushels, increasing the total, in round figures, to 857,000000 bushels. Also, there is a visible supply of wheat of about 20,000,000 bushels, this including the holdings at terminal markets. The invisible supply; that is, the holdings of country mills and elevators, may be very generously estimated at 25,000,000 bushels. We are, therefore, entering a new crop year with a probable aggregate wheat supply of 902,000,000 bushels. A year ago the United States entered the crop year with a billion-bushel supply.

It is not easy to visualize the immensity of a wheat supply of 902,000 000 bushels. It is an enormous total, but in the light of world stocks and world needs, is it a great supply? How is that grain to be distributed? This is the first question of the market observer in the quest for a complete analysis of the position of the trade. First in importance, of course, is the domestic consumptive requirements. In recent years the average per capita consumption has been estimated at 5.5 bushels, but following the discontinuance of the war-time substitute era the consumption of bread forced the per capita figure above 6 bushels. Conservatively, the per capita consumption may be placed at 5.75 bushels, which, with our present population, will absorb approximately 690,000,000 bishels. A minimum of 60,000,000 bushels is needed for seed, our domestic needs thus absorbing a total of 750,000,000 bushels. There is thus left for exportation and carry-over into the new crop year, and the latter should usually run not less than 50,000,000 bushels, only 152,000,000 bushels. In the event of reduced domestic consumption there will be an increase in the exportable surplus.



Never before in history has the world been so sorely in need of American wheat. Only a few days ago the Argentine government announced it would export only 19,000,000 bushels more of wheat the remainder of this crop; that is, to the close of 1920, as her own domestic supply has already been too heavily drawn upon by foreigners. For the present further exports from Argentine, one of the important exporting nations of the world, are being prohibited. Australia is out of the question for this crop year as a source of wheat supplies for the outside world owing to drouth. India has a crop from which 60,000,000 bushels will be available for export. Russia, before the war one of the mighty surplus producing nations of the world, is today an uncertain factor. Production in other European countries so far as can be gleaned from reports is less than a year ago, owing to unfavorable weather and the abnormal conditions resulting from the war's ravages. Even in normal times Europe never produces its normal breadstuffs needs. Her import requirements are placed at a minimum of 600,000,000 bushels, the bulk of which must be drawn from North America, Canada and the United States. Argentine is out of the question until the condition of her next crop is known, and that will be late in 1920 or early in 1921. Canada is enjoying excellent wheat crop prospects at the present time, and if the present outlook materializes an exportable surplus of 125,000,000 to 150,000 000 bushels will be available.

Barring damage from black rust or other ravages which might seriously reduce the spring wheat yield of the United States and that of Canada, these two countries, theoretically the bread-basket of the world today, have an exportable surplus in prospect of only 302,000,000 bushels at the most, only half of the minimum European requirements for the twelve-month which we have just entered.

The most recent government statistics show total exports of wheat and wheat flour for the first eleven months of the past crop year, to June 1, 1920, amounting to 245,850,012 bushels. Official figures for the last month should increase the total to 275,000,000 bushels. In the preceding crop year the exports from this country amounted to 287,438,000 bushels; during the twelve-month of 1917-18 exports were only 132,580,000 bushels, and in 1916-17 203,574,000 bushels were shipped. The greatest total ever exported was in 1914-15, the first year of the war, when 332,465,000 bushels were cleared from American ports. The average yearly exports from the United States between 1915 and 1919 amounted to 233,342,000 bushels, which exceeds the total available for export this year.

It is apparent that the foreign situation will be the most vital price-swaying force with which markets of the United States must contend. The foreign demand provided the basis for the bulge in prices on the past crop to a level above $3 a bushel. It is the underlying influence in the present record high July market The foreigners have been bidding almost continually, taking as much grain as offered on their bids. Purchases have been made for shipment up to the close of September, with prices at about $2.65 a bushel for August and September delivery, basis Kansas City, for No. 2 hard or red winter. For spot shipment European buyers have been paying around $3 delivered at the Atlantic seaboard, and their demands have been of an urgent character.

No matter what Europe requires, her ability to make payment will determine the volume of her buying of wheat. Foreign exchange enters here as a serious problem. Continuation of current rates of exchange, which shows sharp advances from recent months, would be favorable to wheat prices. English exchange is now around $3.92 for demand sterling, against the low of $3.18 in February and $4.50 a year ago. Francs at 8.10 cents are about 30 percent lower than at this time in 1919. Italian lire are down 25 percent from a year ago, being around 6 cents. The German mark is more than 100 percent higher than the low of the fore part of 1920, but considerably cheaper than last year. It will not be surprising if the weight of grain bills on the exchange market depresses rates, thereby further reducing Europe's purchasing power. On the other hand, the intervention of European governments in the distribution of wheat, the "staff of life," among their people will give precedence to the financing of this buying. There is a possibility that these governments will attempt to depress prices soon after their own harvests become available after August, but

(Continued on Page 14.)

HOME HEATED

(Continued from Page Two.)

upstairs. I will just add that our main chimney extends thru the hall upstairs.

Of course we do not have enough heat in the upstairs to make it comfortable to sit in or read in in cold weather, but there is no chilliness or dampness like you find in a house without a furnace.

We think it far more healthful than sleeping in hot rooms. We always sleep with windows open except in very windy weather. Before we had the furnace the children and myself were subject to tonsilitis and my husband to quinsy, but now we are always free from tonsilitis and my husband never has any trouble from quinsy. We are inclined to think the furnace has something to do with this. We have used our furnace about eight years and it has cost us less than $1.00 for repairs.

"I am obliged to replace the gutters and eaves troughs on my house every two or three years.

A new coat of paint every year or two may make business considerably less brisk for the tinner and roofer, but it will save the owner a lot of money and keep the painters busy.

Nine Points for the Tractor

Lloyd F. Fassett, Wyoming Co. Pa

There are a number of reasons why our tractor has been a good investment for us, I will give briefly a few of the most important:

First.—We have been able to produce more than we ever did with horses.

Second.—We have been able to produce better crops than before because the ground can be plowed on time and with the extra power we set the harrows deeper and can be rushed right thru a hot day when it would be almost impossible for horses to work, therefore producing a much better seed bed.

Third.—We can do the work with less help of men and horses. The wages of the man for one year, which we have saved, would amount to almost the price of the tractor, saying nothing about the cost of keeping an extra team for a whole year.

Fourth.—We always have a steady and dependable source of belt power at any place we wish and for any job from running a washing machine to a big blower.

Fifth.—We can get over our orchards oftener so that we are able to control moisture better and at the same time keep the trees growing good and producing better apples.

Sixth—The actual cost of doing work with a tractor is about the same as with horses, but the fact that we can do our work on time, do a better job and at the same time save help makes a great advantage in favor of the tractor.

Seventh.—Our farm is fairly level, therefore suitable for tractor farming.

Eighth.—Our tractor is suitable for our work.

Ninth—The depreciation after two seasons has been small and it looks now as if it were good for several years more.

There are numerous other reasons, but we believe that if a man uses good judgment in deciding first, whether his farm is suitable for the use of a tractor, and if so what make will most nearly meet his conditions. And if after he picks out and buys his tractor he will not overload, under-lubricate, overheat and let the bolts and nuts fall out of it until the tractor falls to pieces like "the wonderful one-hoss shay," a man who properly cares for his tractor will find it is one of the greatest things that man ever invented and one of the most profitable investments he has ever made. Not only this, but he does not have to work sixteen hours a day to get his work done. As one tractor company puts it, "Tractors make happy farmers."

Lighting Systems for the Farm

Better Means of Lighting the Farm Home are Much Desired

By F. W. Knipe

Agricultural Engineer

Due to the advanced age in which we live and to the rapid changes which take place from year to year, the average person of today regards as necessary those things which a few brief years ago were considered only luxuries. And so it is that the family in the country now considers it only just that they should be as well provided for as their city cousins. Therefore, instead of sitting back with an envious eye and gazing upon the so-called "luxuries" of the city, the country family now adopts those "luxuries" and in so doing makes the country, not just as good a place to live in as the city, but a much better place.

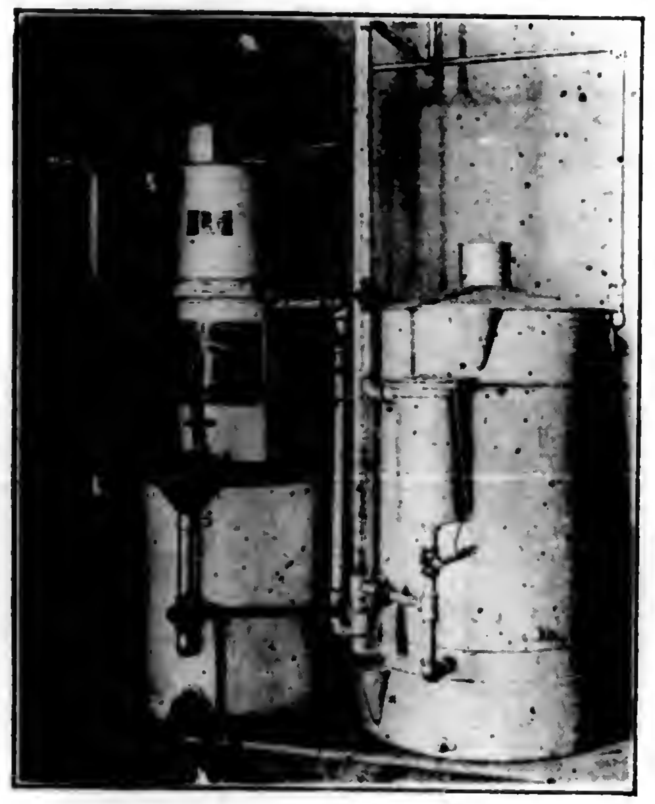
One of the revolutionary movements has to do with farm lighting. It has not been so many years since the old dip candle was the chief means of lighting the country home and in the cellar at the home of the writer some of those old dipped candles are still to be found. But with the discovery of petroleum the candle gave way to a much better light, which in its turn is rapidly being superseded by still more modern systems.

In this article I shall attempt to point out some of the advantages and disadvantages of present lighting systems. Each system will be discussed individually and comparisons made with other systems relative to first cost, upkeep, efficiency, safety, flexibility and any other item which may be peculiar to any particular system. These are some of the chief ideas to bear in mind when planning to install a lighting system. The following order will be observed in the discussion: First, kerosene lighting; second, acetylene lighting; third, gasoline lighting; fourth, alcohol lighting, and lastly, electric lighting.

Since the discovery of refined petroleum as a means of lighting down until almost the present time the coal oil lamp has held sway and it is still used in many more country homes than all other systems combined. However, the case against the smoky old oil lamp is a strong one. In the first place, who ever heard of a housewife who enjoyed washing smoky lamp chimneys and filling lanterns? Consider the time consumed every day in the year in cleaning lamps! Time which could have been used much more profitably elsewhere. The work on a farm is hard enough for a woman anyway, so her labor should be lightened wherever possible.

There is another grave point against the oil lamp and that is danger. This point should be considered seriously, especially where small children are around. Then, there is the point of health. The burning oil fumes are disagreeable enough to smell in themselves, but in burning they destroy such large quantities of oxygen that almost excessive ventilation must be used in order that the occupants of the room may not suffer from want of pure air. Even after consuming so much air, the oil lamp is not efficient from the point of view of light produced. Still other disadvantages are the soot deposits left everywhere in the room, an undesirable color of light, great quantities of heat developed and much attention required in order to maintain a uniform light.

From the point of view of flexibility the oil lamp may be considered from both sides. It is flexible in that it may be moved readily from place to place, but everyone knows this is a dangerous practice. It is not flexible in that it cannot be used for power and only inefficiently for heat.



Type of Acetylene Generator

The great Chicago fire was started because a cow kicked over a lantern in a barn, and many other fires are caused each year in just the same way. For barn lighting purposes it is the most inefficient means known because of this constant danger. A new barn, erected because the old one was destroyed by fire from a coal oil lantern, would pay for several modern and safe systems of lighting.

But the case is not entirely against the old oil lamp and some of its advantages are, reliability, cheapness in first cost, and simplicity. These are practically the only things in its favor. However, within recent years improvements have been made which overcome some of the old objections. The greatest of these improvements is the development of the kerosene mantle. The first cost is somewhat more but the addition of the mantle increases efficiency many times. It gives a much better light and requires less oxygen, besides eliminating to a great extent the undesirable odor. Experiments indicate that a mantle gives four times the light for the amount of oil consumed. Unfortunately, tho, the mantles are very fragile and hard to handle.

Acetylene

A number of years ago it was discovered that charcoal and lime heated together in an electric furnace to a very high temperature would unite to form calcium carbide or "carbide," as it is popularly called. When this carbide is dropped into water a gas is given off which is called acetylene, which gas, if properly controlled, will burn with a very brilliant flame. This burning property has been made use of in the modern acetylene lighting systems which have proved to be very popular in many places. Acetylene gas is not dangerous in itself except when under pressure or when mixed with air, when it forms a highly explosive mixture. Therefore, it is well to buy no plant where a pressure exceeding two pounds is generated or where the gas can escape into the house or to a flame.

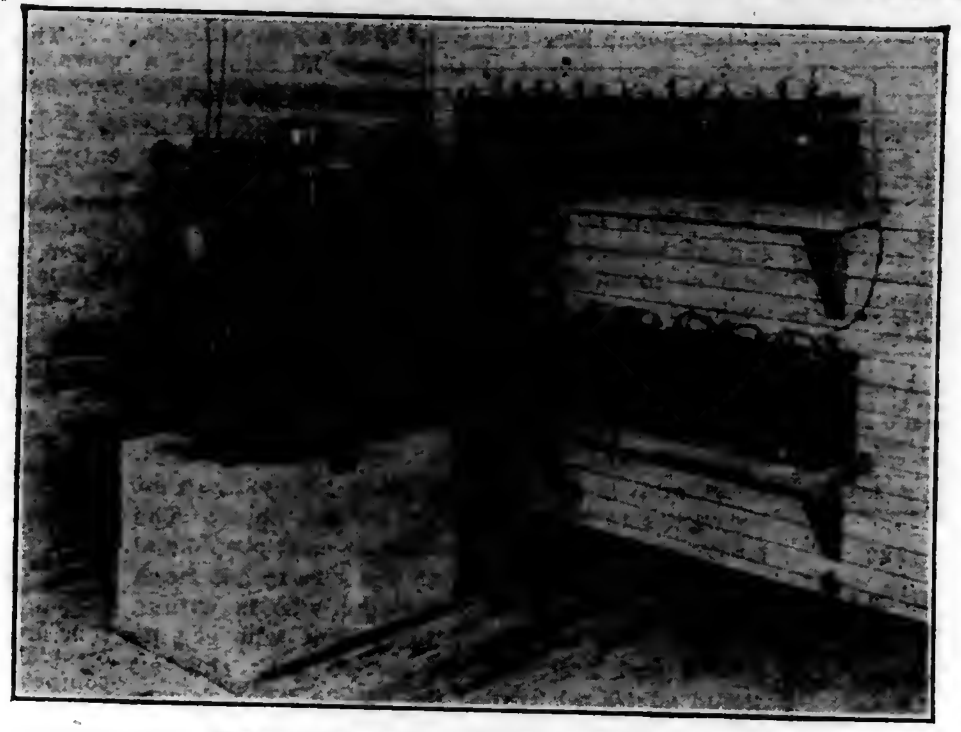
"Carbide" is obtainable in sizes ranging from a powder to lumps of varying sizes up to four inches. It decomposes quite rapidly when exposed to air because of the presence of water vapor in the air. For this reason care should be exercised to keep it in a metal container which is airtight. Due to its tendency to decompose in air the large lumps are most satisfactory because as they decompose a film of lime remains on the outside of the lump and shuts off air and moisture from the inside, thus checking decomposition.

Many types of plants are on the market but they all work on the same principle, which consists in placing the "carbide" and water together. Two main classes of types are recognized, however, namely, water-to-carbide feed or non-automatic, which requires a constant attendant. A system not adopted to farm use which will not be discussed here. The second system is the carbide-to-water type, which is automatic and is the most common and satisfactory one. In this system the "carbide" automatically drops into a comparatively large tank of water and is controlled by the pressure of the gas. A large tank of water

is needed in order to keep the gas cool for a great amount of heat is generated as decomposition takes place.

A further classification is made for indoor and outdoor plants. Outdoor plants are still further divided into two types, one above ground and the pit type, below ground. Indoor types are likewise divided into two sub-classes, one of which is the basement type and the other is the small, semi-portable type which may be placed where most convenient. Indoor plants are not recommended because of the greater danger, and being smaller they need more care and must be recharged oftener. The outdoor types are very similar, differing largely in that the one above ground may be cleaned and recharged more easily. Outdoor plants of 100 pounds capacity require charging on the average farm about once every three months.

The advantages of acetylene over kerosene or gasoline are that it gives a bright light without mantles, consumes very little oxygen and burns with a clean and odorless flame. There are no lamp chimneys to wash and no mantles to break. On the other hand it has some disadvantages. In the first place it is somewhat complicated. However, this is no mark of demerit because a little explanation from the selling company will readily simplify the complication. Another disadvantage is the element of danger which is largely eliminated with outdoor plants but is an important consideration with an indoor plant. A third disadvantage is that it requires a frostproof storage, since water is an essential part of the chemical reaction. Still another disadvantage is that it cannot be used as a source of heat because an acetylene flame will rapidly destroy most metals. This system is one of the most delicate to handle, which also adds to its disadvantages.



Electric Generator and Storage Batteries

Acetylene may be used for barn and outbuilding lighting if due precautions are taken to keep everything away which might catch fire. This may be done by enclosing the flame in a wire gauze, but even then it is rather dangerous because the gauze may become broken.

When considering purchasing an acetylene lighting plant the following points should be borne in mind: First, it must be fool-proof and constructed so as not to explode; second, it must insure cool generation of gas; third, it must be well constructed and of good material; fourth, it must be simple; fifth, it should create only a small amount of pressure; sixth, it should be easily cleaned and recharged without loss of gas; seventh, it should require little attention; eighth, it should completely use up the carbide; ninth, it should have blow-off relief outside of house to control possible excess pressure; tenth, it should be automatically regulated so that too much carbide will not drop into the water at one time.

Electricity May Be Used for Heat, Light and Power

A list of inspected lighting plants may be obtained by writing to The Underwriters Laboratories, Inc., 207 E. Ohio Street, Chicago, Ill. It is advisable to find out how plants under consideration are rated by this organization.

Gasoline

In order to use gasoline for illuminating purposes it must be changed to a gas. There are three ways of doing this. The first method is most used and is also the most dangerous. This consists of heating the gas, examples of which being the blow torch, gasoline stove, portable gasoline lamps and various systems of leading raw gasoline to individual lamps thru small tubes. In each case the gasoline is under air pressure produced by pumping. Flame-heated generators, whether inside or outside tanks, come under this method.

The second method of producing gas is by bubbling air thru gasoline. In this case the air becomes saturated with gas fumes and is conducted thru pipes to the place where it is to be used. This type requires quite a large tank, located outside, and is rather too large for ordinary farm lighting. One of its main features is that it is very safe. The third method of forming the gas is to bring air into contact with the surface of the gasoline in a large tank. The principal works much on the same order as the carburetor on an automobile, except on a more extensive scale. There is a carburetor in the system which adjusts the amount of air and gasoline in correct proportions. High test, high-priced gasoline is necessary for best results. Altho the least dangerous of any of the gasoline systems, it is not practical from the point of view of a farm outfit.

The principal danger from gasoline systems comes from having gasoline around, since at ordinary temperatures it gives off a highly inflammable gas, vapor from one pint of gasoline being sufficient to make 200 cubic feet of air explosive. It is the most economical plant so far as fuel cost is concerned but great care and vigilance are constantly necessary in order to insure any degree of safety. The portable lamp type is absolutely unsafe and when used should be filled only by daylight. Considerable time and care are required to start it and the hissing noise which it makes is very disagreeable.

The case of gasoline lighting as compared to kerosene lighting is about as follows: It has the advantages of being clean and odorless and can be used for heat as well as for light. The light is very bright, becoming almost too bright when used with a mantle. Further than this it has but few advantages to recommend it. As for disadvantages, in the first place it is dangerous; secondly, the installation cost is considerable more than for kerosene; lastly, it is not so reliable as kerosene, acetylene or electricity.

Alcohol

Alcohol produces a fine soft light and has the advantage of being comparatively safe from explosion. It also burns with an odorless flame which also may be used for cooking. Unfortunately, alcohol will not come into favor until petroleum is much higher in price and by that time electricity will probably be such a universal source of light that alcohol will have no chance. However, it has everything in its favor when compared with kerosene, gasoline and acetylene—except the cost.

Electricity

There are a number of qualities to be found in electric lights not to be found in other illuminants. Buildings properly wired make fire risk practically negligible. This includes barns and all outbuildings as well as houses. Matches have caused many fires but none are needed in a building properly equipped with electricity, since all one needs to do to get a light is just press the button. Fire hazards from the thoughtlessness of children is practically unknown because the light may continue to burn without doing any damage even tho forgotten.

There are two sources of current, the first of which is the high voltage secured from city currents and which is the best, if obtainable. But the vast majority of farms cannot be lighted in this way, hence the development of the second class, namely, the small plant installed on the farm, usually of low voltage and equipped with storage batteries. Under this class there are three distinct types. The first of these is the non-automatic. This type requires an operator to start it and after the batteries are charged the operator must stop it. The second type is the full automatic system which starts and stops itself, depending upon the charge held in the batteries. A system of this kind is subject to neglect, because as long as it runs it is left alone, which is not good practice since it needs a certain amount of attention. Therefore, the third type has been developed, namely, a semi-automatic system. This system requires an attendant to start it but stops automatically when the batteries are charged. It is by far the best system, since the operator will naturally pay some attention to it when he starts it. The power to drive the generator may be derived from a windmill, from water power, or from a gasoline engine. Engine power is favored above the others because it is more dependable and more uniform and usually can be more conveniently located. Mechanical energy must be changed into electrical energy thru the generator. Systems range from 32 volts to 110 volts, but the low voltage generator and storage system is much the cheapest and has practically all advantages of a high voltage system. Fire risks from crossed wires are very low on a 32-volt system. There is one objection to the low voltage system, which is that it cannot be used for transmitting current more than a few hundred feet. In case buildings are far apart a high voltage system is necessary. If the system is located midway between buildings the distance to either extremity may be reduced to a point where a low voltage system could be used.

Since storage batteries are used, a direct current generator is necessary because an alternating current cannot be stored except after special treatment. This storage battery stores current just as water is stored in a reservoir. These batteries require but little attention and give practically no trouble if instructions are followed. A switchboard and its accompanying instruments should be placed near the batteries so that their condition may be observed at all times. This switchboard should be equipped with fuses which

(Continued on Page Fourteen.)

PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880

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PHILADELPHIA, PA., JULY 31, 1920

VOLUME 48 NUMBER 5

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

The Power of Organization

THE RECENT increase in the wages of railway employes adds another item to the ever-mounting cost of living. Like the story of "The House That Jack Built," every increase in wages or shortening of hours is added to the previous total and we start on another journey around the circle which mounts upward like a spiral stairway. There is as yet no indication of any appreciable reduction in prices, at least in those paid by the consumer, altho it was hoped and expected a year ago that production and living costs had reached the peak and would begin to subside.

There are certain factors which have prevented the realization of this hope. First among these is that demand is greater than the supply in most lines, and this, coupled with the ability of the public to buy, has produced a situation favorable to profiteering. Increasing costs in turn make even the abnormal wages insufficient for the new standard of living and demands are made for another increase in rates and wages. No recent demand made by either organized business or organized labor for increases has been turned down, and one chief reason for this is the political or economic power which strong organized bodies can wield. This general statement is true in the fields of transportation, manufacturing, unskilled labor and the industrial trades. As long as this condition continues there is little chance for a reduction in the cost of living except in the original prices paid for farm products.

Does not this bring home to the farmer the necessity for organization for business purposes? The drive that will ultimately be made for cheaper food can be met only by an organized body. Better selling systems and more economical production methods can be acquired only trhu organization, and the business of agriculture is the weakest of all industries in both these lines. In fact, there is not one phase of the business of farming but what needs the co-operative effort of farmers as a class and if the business is to prosper and be able to hold its own with other groups in these strenuous times, better and more united business systems must be adopted on the farms and in the marts of trade.

Don't be a Sucker

DURING the course of a year we receive a great many letters asking our opinion about this or that investment scheme, the number of which is legion. A typical letter inquires about the advisability of buying stock in a company organized for the purpose (?) of extracting oil from rocks in a certain State. Fake oil stocks are especially numerous just now because of the fortunes made in oil. Another farmer was influenced by the neighborhood excitement caused by promoters who wished to sell stock to start an automobile factory in a small town with little railroad facilities and no available labor, but which had some loose money—the chief attraction. In fact, there is no end to the kind of schemes hatched by unscrupulous individuals who have no other business qualification than the ability to separate gullible people from their money. It was honestly stated by one of these slick individuals who advertised that upon receipt of five dollars he would give advise anyone how to make $5000 a year without work. Upon receipt of the money he returned a slip containing these words, "Fish for suckers, as I do."

To all inquiries about investments we make one answer: "Go to your banker and ask his opinion." That is in line with a banker's business and we believe they are all not only willing, but anxious to advise people about the reliability of business concerns. They have the experience and knowledge which enables them to give safe advice, especially about little-known or questionable propositions. Unfortunately, the average victim is inclined to be secretive about his interest in schemes which promise unusual dividends. Whether it is the opportunity or his avarice that he wishes to keep secret we do not know. The native sporting spirit is strong in most people and when this is combined with a desire to get much for little we have an individual who is willing to hand over his money to the one who can lie fastest and best. In connection with this we would advise all to read the article, "The Farmer and His Money," on page 14 of this issue.

Cow-Testing Reports

WE ARE extremely sorry not to be able to publish all the cow-testing reports sent in, but the limitations of space compels this omission. No community work has grown in favor more than has cow-testing and none is producing more concrete results. Those who have it in charge are to be complimented for their success in making the good work popular. We are well aware that there is considerable local news value in every report, and we would be glad to publish all of them if we had the space, which, unfortunately, is limited by the paper shortage.

Order Early

FOR FIVE YEARS it has been necessary to advise farmers to order their freighted goods early because of congested shipping conditions. The situation is as bad now as it has been at any time in the past and farmers who wish lime, fertilizers, machinery, or any heavy freight for fall use should place their orders at the earliest possible moment. Every line of business is handicapped by this condition. It hampers business at both ends and tends to increase prices, since it affects the shipping of farm and manufactured products to markets as well as the raw materials to farm and factory. In spite of the unparalleled development of transportation facilities during the last fifty years, it has not been sufficient; at least, it is not efficient under the present stress.

Rags! Rags! Rags!

WOOL GROWERS will find in the high prices paid for rags one of the chief reasons for the present low wool prices. Great Britain is the chief rag market of the world and the U. S. Consul at Leeds has learned that the price of rags used as wool substitutes has increased 300 to 1200 percent since June, 1914. Altho cloth may be technically "all wool" when made from all wool rags, yet it is shoddy, pure and simple, and has not one-half the wearing quality of that made from virgin wool. The consumer infers that he is getting virgin wool when the merchant guarantees his goods to be "all wool," when in reality there is little virgin wool in it. It is due the consumer as well as the sheep raiser that the manufacturer be compelled to stamp the cloth with information telling the truth about the source of wool. The French-Capper Truth in Fabric Bill should be passed without delay by Congress when it meets and every sheep raiser should get behind the movement by joining the National Sheep and Wool Bureau of America, whose headquarters are at Chicago, Ill. The fate of the bill will depend upon the amount of pressure which wool growers and consumers bring to bear upon Congress, since a strong influence against it is being exerted from some source. Last year the manufacturers gave the public an allowance of three pounds per capita, while the estimated need is twelve pounds. Is it any wonder that we have a billion pounds in storage and no sale for wool now?

Our Washington Letter

There is scarcely a Government activity the movements of which do not in one way or another very seriously affect the interests of the farmers. "It is a far cry" from the Pennsylvania or Middle West farm to the United Shipping Board, apparently, nevertheless statements given out by men closely identified with the Board indicate that farmers, especially the live-stock raisers, may well keep a close line upon the plans and projects under way or contemplated by the men in charge of this Government organization.

In an address delivered before the National Association of Manufacturers the other day Admiral Benson, chairman of the Shipping Board, said that "the Board is determined to live up to the letter of the Jones Merchant Marine law in spite of threats and propaganda carried on by foreign interests seeking to defeat the purpose of the law," which evidently means that an attempt will be made to build up an adequate merchant marine.

* * *

In spite of the claim that the American Merchant Marine is to be operated with full recognition of the protection of all American industries, it is announced that two projects are to be developed as soon as possible which come into direct competition with American agriculture. One is a line of refrigerator steamships between Atlantic Coast ports and the Plata River ports in South America for the purpose of bringing cheap meat from the Argentine to the United States. The other is a refrigerator line to Australia for the same purpose. It is argued that if our merchant marine does not carry the cheap farm products from these countries to our shores the ships of other nations will, and the United States might as well have the benefit of this trade. Profits for the Merchant Marine and an abundant supply of cheap food for the millions of consumers in the eastern cities are the inducements back of this project, which will bring the live-stock raisers of the Middle West into direct competition with the stock raisers of South America and Australia in our home markets. The only remedy that is suggested by those friendly to the stock-raising industry is a tariff on meats sufficient to protect our American stock farmers from the competition of imported meat products.

The matter of securing a reduction in freight rates on export applies and better transportation facilities has been taken up with the Shipping Board by the National Grange Washington representatives, acting for members of the Grange in several States. Unless there are better facilities provided and less prohibitive rates granted, the Maine apple growers say they will be put out of business. The American Apple Shipper's Association and other organizations, it is expected, will join in this move for better shipping service. A request will be made to the Shipping Board for allocation or special refrigerator ships to handle the apple situation. Some hopes are entertained that relief is in sight.

* * *

President J. R. Howard, of the American Far Bureau Federation, while here recently, said "the railroad tangle, with its resulting tie-up in grain movement, is costing the farmers hundreds of thousands daily." He says that with as high as 25 percent of last year's crop still remaining in the local elevators in some sections, and totally inadequate movement of the new crop, local buyers find it necessary to protect themselves by wider margins. These increases in margins are costing the farmer at the elevator a total of 10 cents or more a bushel over the usual handling margins. And this does not benefit the consumer, as it is a direct loss, a sacrifice to inefficiency. "Flour, in fact, is selling at a higher price today through the operation of some of these same inefficiency factors."

"The railway laborer who has wilfully cut down his volume of work and repeatedly struck for increased wages may wake up one of these days to find that the increase he has caused in the cost of food, clothing and shelter more than offset the increase he has demanded in wages. There is no more damnable point at which labor can attack our economic structure, and no surer way of cutting its own throat than by cutting down the efficiency and the carrying capacity of our arteries of transportation," says Mr. Howard. "One of the most lamentable features of the whole situation is the effect it may have upon next year's crop. Preparation for the next crop will start within a month and prediction of heavy cuts in acreage are general."

The American Farm Bureau Federation has plans under way to effect a co-operative grain marketing system which will handle the bulk of the grain produced in the United States at a considerable saving to both producers and consumers. All farm organizations have been invited to co-operate in this movement, especially the associations which have under their control co-operative elevators, with a view to developing a

central co-ordinating sales agency for the handling of wheat and other grains. It may take a year or more to perfect the organization and establish it upon a firm, permanent business basis.

* * *

Preferential assignment of cars for the loading of fertilizers to the extent of a minimum of 75 percent of actual daily requirements has been ordered by the Interstate Commerce Commission. This demand on the part of the fertilizer trade is being followed with another for priority orders for cars to move raw rock phosphate from the mines to the fertilizer plants. The fertilizer movement for the season has already begun in advance of the usual season for the purpose of helping out the car supply.

The Department of the Interior announces that nearly 14,000,000 acres of western lands were classified during the months of June under the stock-raising homestead law, which makes public lands available for entry for stock-raising purposes in homesteads of 640 acres or less. More than 74,000,000 acres have now been classified as stock-raising land since the passage of the act in 1916.—Elmer E. Reynolds.

HARRISBURG LETTER

Women Saving the Day.—Reports coming to various branches of the State government from agricultural counties indicate that more women have been working in the fields this summer than ever before and that in more than one section women contributed much to the harvest. In some of the industrial counties wives of miners and mill workers, especially some foreign-born, went to the country to help out. The situation in regard to harvest hands was serious this year and in some communities farmers appealed to the State agencies and also to chambers of commerce, but the needed help was not forthcoming, forcing people to community work with considerable loss of time in getting about. However, the reports on the wheat harvest continue to be gratifying and the corn and potato prospects are said to be excellent.

The Beetle Gets to Work.—The Japanese beetle, which caused so much apprehension in the Philadelphia district, has gotten to work on this side of the Delaware and a series of preventive experiments have been under way with Federal and State officials in charge. It is believed the beetle can be isolated and its ravages checked before it gets very far, as was done some years ago with the brown-tailed moth. A good part of the field force of the Bureau of Plant Industry has been detailed to this section and the apple survey men have also been moved to near Philadelphia from the Scranton region.

Seventy Consolidations.—It is believed that by the first of August not less than 70 consolidations of rural schools will have been listed. The necessary steps have been completed in approximately fifty localities and in twenty other preparations are well advanced. This work has been going forward so rapidly this year that there has been no time to make a report on the subject and Dr. L. L. Driver, who is in charge, has been trying to pick out some typical districts so that demonstration or model schools may be indicated. Owing to the scarcity of teachers the consolidation movement has advanced materially and transportation is now the problem which is being worked out.

Rural School Building.—In spite of building conditions there has been a pretty fair amount of school building in the rural counties of Pennsylvania judging from reports coming here and several high school buildings have been constructed. The number of districts which are enlarging schools, mainly to care for agricultural and kindred courses, is held to be one of the most satisfactory phases of the situation.

Farmers Pay Penalties.—One of the interesting features of the vigorous enforcement of the dog license code by the State Department of Agriculture has been the number of farmers who have appeared and announced they were violating the law and are ready to pay the license and fine. In Lebanon and Bucks counties several farmers did this very thing. The Bucks prosecutions have passed the 150 mark. In Lebanon there were 250.

State to Help Granges.—The State Department of Forestry has followed up its plan for giving advice to farmers on when and how to cut their woodlots and timber and to reforest by asking members of granges to unite and to aid in demonstration woodlots. The Forestry authorities are confident the State can be of considerable assistance through its trained men and is planning to take forestry and conservation to the farm house.

Inspecting the Creameries.—All milk establishments put under State inspection by acts passed by the General Assembly in 1919 are being inspected by State agents and some of the reports indicate the owners or managers got orders to clean up and get more in line with the purpose of the acts. The inspection is being closely followed by Secretary of Agriculture Fred Rasmussen, who intends to make the results the basis of some new lines of policy and possibly some recommendations to the next Legislature.

Railroads Rise to Occasion.—The organization of the railroads of the country have assured Secretary Rasmussen of their willingness to furnish cars for fertilizer movements this summer and fall and a minimum of three-fourths of the requirements of an urgent character will be supplied. The secretary is urging early and careful buying of fertilizers.

Blight Covers State.—Reports received by Commissioner of Forestry Gifford Pinchot indicate pretty conclusively that the chestnut blight has covered the whole State, it having been reported from far western counties and the northern tier where its presence had not been noted. The State is now working to market its chestnut timber as rapidly as possible to realize on what remains unharmed.

The New Basket Ruling.—The State Bureau of Markets has issued the service and regulation announcement regarding the standard baskets for grapes, fruits and vegetables, crates and berry containers. This is the first of the kind to be made for Pennsylvania and is under the Act of July 9, 1919. The Bureau is also enforcing the new apple grading law, these activities being the first to be undertaken this year in the way of supervision.—Hamilton, Harrisburg, July 26.

NEW YORK LETTER

Holsteins Go West.—The State Holstein Association is sending a carload of choice Holstein calves west for junior club work and several head of cattle are also going as bases of herds. Only herds under federal inspection are examined for stock for this purpose.

Tariff Changes.—Farmers of the State welcome the announcement of probable tariff revision more favorabe to agriculture. A duty on beans is urgently needed. The bean-growing industry has suffered great handicaps for lack of it. Onions, butter, potatoes and wool growing also need protection.

Farm Labor Situation.—The small fruit crop is in grave danger of wholesale loss because sufficient help to secure it cannot be had. The crop of cherries is heavier than for years past and small growers are without resource. Larger fruit farms are able to employ units of the Woman's Land Army. Growers are also unable to ship for lack of baskets and crates, while many canneries are helpless to preserve fruit and peas for lack of tin cans to contain them. Drastic measures are needed to save valuable foods. City employment bureaus are placing quite a liberal number of men to work at general farming.

Booms Better Wheat.—Wayne County farmers have a committee to secure a higher grade of seed wheat and this fall they will engage in a campaign to secure wider use of the better seed.

State Solvent.—Due to enlarged revenue receipts this year the State has a surplus on hand of over $31,000,000. The year's general budget of expenditures was $141,885,600.

Potato Inspection.—The big inspection tour of Long Island potato field tests to determine what seed is freest from disease was attended by growers from the Middle Atlantic States and Canada. For the second time Cortland County excelled, with nearby counties ranking close seconds. The high altitudes of those counties seem favorable to freedom from disease.

Sales of Stock Successful.—The sales of stock in the new State-wide Farmers' Co-operative Exchange has amounted to $750,000, or three-fourths of the desired million. It is expected that the remaining 50,000 shares at $5 each will be placed before the close of the year. Meanwhile plans are being made for the immediate development of the business along practical lines.

Seven County Picnic.—Seven Pomona granges will picnic together at Owasco Lake on July 28th. L. J. Faber, Master of the Ohio State Grange; W. N. Giles, Master of New York State Grange, and the seven Pomona masters will give addresses. The chief topic will be co-operative development among farmers.

Harmful Slaughter of Birds.—The State entomologist declares that ruthless slaughter of birds is the cause of unusual increase this year of insect pests. The snow-white linden moth is a new pest doing much damage to maple and beech trees. The Catskills and neighboring sections are invaded by it.

Big Cheese.—The previous records for a big cheese for the State Fair will be broken this year in a 5-ton cheese, as big as will go into the doors of the agricultural building. It will be cut on a Monday by the Lieutenant-Governor and sold in pound cartons.

Crop Notes.—Cool, moist growing weather has favored potatoes for a week or two, but haying goes slowly with a short crop to secure. Straw will be short in all the grains. Pastures are getting short and the milk yield is already cut decidedly.

Rural Schools.—There is general interest in the improvement of rural schools, with voluntary consolidation on the part of patrons as the only sensible solution to the problem of few pupils and poor teachers.—M. G. F.

NEW JERSEY NEWS

Poultrymen Chartered.—Promoting their interests, protecting their welfare, and developing opportunities of its members through co-operation, as well as buying and selling poultry and maintaining close relations with other similar organizations, are the principal objects of the Poultry Raisers' Association of Hammonton, which has started operations from Bellevue and Valley Avenues, Hammonton, with Harry M. Carroll, as agent. The organization has been chartered in the office of the Secretary of State at Trenton.

School Gardens.—Thousands of tons of vegetables and fruits will be gathered from the school gardens in New Jersey this year and principals and teachers in the institutions are aiding largely in making the work a success. Fifty pupils in the public schools at Princeton near the University have individual gardens that are already producing in a most splendid manner. The children are not only raising nearly every variety of vegetables but are also seeing that the gardens are kept free from weeds and being cultivated.

Too Cool For Crops.—While the days have been adequately warm the nights have been a little too cool and showers have been too frequent for the best progress of corn and harvest of grass and grain, and a week of settled warm and dry weather is needed throughout the State. Weeds and grass in corn and potatoes have gotten ahead of some farmers, owing to labor shortage and to rain interfering with and increasing the work of harvest. Some wheat has been threshed in fields in South Jersey, while cutting is about ready in northern sections.

Company Dissolves.—South Jersey poultry dealers will be interested in the announcement that the Prospect Poultry Yards Company, which dealt in poultry from Landis Avenue and Main Road, Township of Landis, Cumberland County, has filed a certificate of dissolution in the office of the Secretary of State at Trenton by which it cessed to do business in New Jersey. A. D. Troxell was the secretary and agent of the concern.

Milk Price Jumps.—One more cent will be tacked on to the price of milk per quart in this State beginning August 1st next. The proposed increase has been decided upon by the Interstate Milk Producers' Association controlling the sale of milk in the district that embraces Camden, Trenton and other points. Through Dr. Clyde L. King, milk price arbitrator, the organization issued a statement to the effect that the increase is necessary because of the added cost of everything connected with dairying. The wholesale price of milk will be advanced from nine to ten cents per quart, while the retail cost will be increased from fourteen to fifteen cents per quart.

Odd Farmer's Case.—Apparently for the first time in the history of the courts in New Jersey a farmer has been fined for contempt of court because he did not obey an injunction to restrain him from tilling a public road in South Jersey. A. J. Scott, who operates a farm in Vincentown, Burlington County, is the man. Vice-Chancellor Buchanan, of the Chancery Court, imposed a fine of $50 because he ploughed up a part of a road in front of his premises in Northampton Township and when an order had been issued at the request of the authorities of Northampton Township, who protested against the tilling, Scott ignored it.—K.

POLICY OF CO-OPERATION WITH TIMBER-LAND OWNERS

The Pennsylvania Department of Forestry is extremely anxious to have all timber-land owners practice forestry and thereby get the largest returns possible from their land. To encourage this work the Department will gladly co-operate with private owners as far as its resources will permit.

Upon request by the owner to the Commissioner of Forestry any farm woodlot will be examined and advice will be given free of charge. Large commercial tracts, parks and ornamental plantings will be examined and recommendations made, the applicant to pay the expenses incurred.

A representative of the Department of Forestry will go over the ground with the owner and learn his desire, the kind of material he wishes to produce, and will explain the work that should be done. He will designate the trees for cutting and make such examination and measurements as are necessary to furnish the owner with information he may desire and advise him how to improve his woodland. These instructions, as far as conditions justify it, will include:

1. How to put the timber-land in the best condition for yielding the largest returns.
2. How much material should be cut, its condition, the product into which it should be manufactured and where it may be sold. When stumpage sale is advised a form of contract will be suggested that will protect the owner and the tract.
3. How best to bring about new valuable growth. If planting is necessary this advise will include the species, age, manner of planting, etc.
4. Plans for protection against insects, diseases and fire.
5. Other information of value to the owner which will assist him in applying the principles of practical forestry.

The Department of Forestry will as far as possible keep in touch with the land-owner and give him such assistance from time to time as he may need.

COMING EVENTS

New York State Potato Association, annual meeting and tour, Cortland, N. Y., August 6-7.

Apple Shippers' Association, Chicago, Ill., August 11-14.

Vegetable Growers' Association of America, twelfth annual meeting, Columbus, O., August 25-28.

Hornell Fair, Hornell, N. Y., August 31-September 3.

New York State Fair, Syracuse, September 13-18.

Agricultural Society of Queens-Nassau Counties, annual fair, Mineola, N. Y., September 21-25.

Farmers' Industrial Exhibit and Picnic, Williams' Grove, Pa., August 30-September 3.

Eastern States Exposition, Springfield, Mass., September 19-25.

GREEN MOUNTAIN SILOS

The Green Mountain silo with the new hip roof does credit to any group of farm buildings, no matter how pretentious. With its nut-brown creosoted staves and bright red cedar shingled roof, it is a beauty.

Just as good as it is good looking, too. Each part that has to stand a strain and in a silo that means almost every part—is built extra staunch and heavy.

Green Mountain staves are of extra-heavy, clean, well-fitted lumber—creosoted to weather-proof and preserve the wood. The hoops are of extra-heavy steel with easy-fitting, rolled (not cut) threads.

Note the Safe-like Doors

The safe-like Green Mountain door is a patented feature that insures sweet silage.

The Green Mountain anchorage system prevents warping and blowing over and holds rigid against unusual strains.

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No iron parts on the Green Mountain ladder to frost your hands or pull off your mittens in winter.

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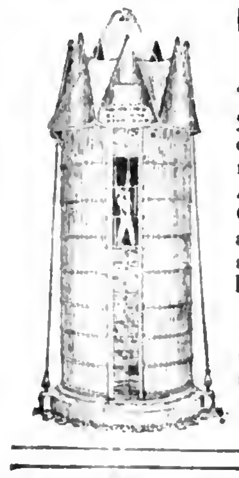

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213 acre fully equipped dairy or grain farm, 10-room house, all necessary outbuildings, fruited cherries, peaches, apples for family use; 2 miles from creamery and milk station; $12,000, only $2000 in cash required.
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214 acre Montgomery County Farm, half mile from town and railroad. Philadelphia and New York markets. Large, fertile fields; 11 room stone house; pipeless heater; phone; large barn, silos, never-failing water; plenty of fruit. Will include 80 tons No. 1 hay, 26 tons straw, all growing crops; milking machines; 15 H P motor; 13 Holsteins, 3 horses, Fordson tractor and complete lot of machinery necessary to operate a [illegible] farm. According to Government survey [illegible] farm is the most profitable. Low priced at $26,[illegible] Palmdale Farm, Palm, Pa.

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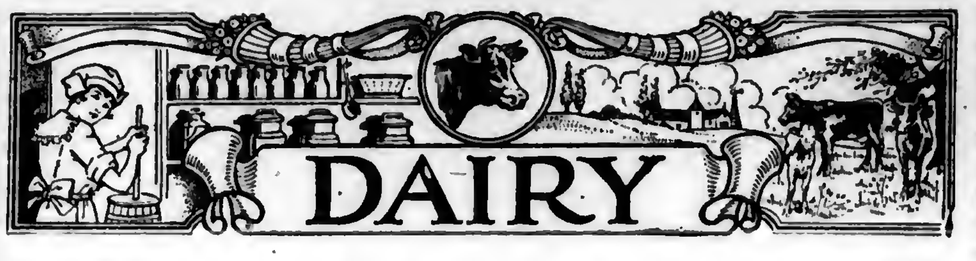


Progress of Dairy Investigations

What the Bureau of Animal Industry is Accomplishing in Its Search for Fundamentals in Dairying

The Dairy Division of the Bureau of Animal Industry, United States Department of Agriculture, is doing some highly valuable research work and conducting investigations which are leading to practical results measured in actual financial returns to the dairymen and in the more complete utilization and observation of dairy products.

The Dairy Division's Swiss cheese investigations are well advanced and are already worth many thousands of dollars to the industry. In the past the successful making of Swiss cheese depended upon favorable atmospheric conditions and other factors which limited the period of cheese-making to certain seasons of the year. It was impossible to make this cheese in winter or from milk held over from one milking to another. In Wisconsin and other states private interests lost many tons of Swiss cheese because of their inability to overcome weather conditions. And it was impossible to get capital to finance an industry attended with so much uncertainty. The dairy specialists of the Bureau of Animal Industry sought to discover the fundamental causes of this condition. In their investigations they found that by pasteurizing the milk they could destroy the bacteria it contained which, except under the most favorable weather conditions acted adversely to the successful production of Swiss cheese, and replace it with bacteria giving the true Swiss cheese flavor at all times. They have thus enabled the American cheese makers to produce Swiss cheese every day in the year, even from milk held over Sunday, and thereby have established a permanent all-the-year-around industry.

A Well-kept Herd of Purebreds

The dairy investigators are now working with condensed milk, seeking to determine what organisms cause the milk to "go bad," as is the case at times in the best managed dairies and milk product plants.

During the war the demand came for food conservation. The Departmet of Agriculture took up the matter with every bureau. Every product in which there was more or less waste by the prevailing methods of handling was carefully considered to see what means could be devised for recovering the food contents ordinarily wasted. Skimmilk was found to be one of these waste products. Millions of pounds of this product were annually dumped into the sewers.

As a means of utilizing the skimmilk the specialists settled on cottage cheese. Men were sent to the factories to teach the creamery butter-makers how to make cottage cheese. These men co-operated with the State authorities and cottage cheese was selected because it was not difficult to prepare. Then there was little commercial cottage cheese being used and it had no market. The Dairy Division engaged forty women to go out and tell the people of the food value of this cheese.

In spite of the fact that this move was criticised and the source of some ridicule at first, the demand has increased marvelously and enormous quantities of cottage cheese are now sold thruout the country.

The Division is now working on other skimmilk cheeses, on Italian cheese and an albumen cheese. One-half of the milk now produced is made into butter and butter removes only one-half the food content from the milk. The albumen, casein and sugar left in the milk are all good food. The specialists have recently worked out and patented for the public a method of drying albumen. Whey butter, of which large quantities are now made in cheese factories, is one of the results of these investigations conducted by the Dairy Division.

The Dairy Division is also working with animals on an extensive scale. At its Beltsville farm, a few miles out in Maryland, it has several large projects under way. One is a study of the principles of animal breeding, with the object in view of finding out, if possible, how to develop a strain of cattle that will be uniformly high producers. The specialists are working on the problem as to whether it is better to line breed or out cross. The common practice is to line breed. They have a definite project, now four years under way and which will take several more years to complete, to establish definitely whether or not it is more effective to use unrelated breeders or line breed. Several colleges are working in co-operation with the Division in this investigation, the Department furnishing the bulls and securing records of their achievements.

Why is it that one cow under normal conditions gives twice as much milk as another? Is it her breeding, her feed, or other cause?

Doctor Meigs, at the Beltsville farm, is trying to find out the problem of milk secretion. He has found that cows that are not fed grain during the dry period will be limited in their milk production the following year. This is due to insufficient mineral matter. He has taken ordinary dairy cows, somewhat run down in condition and production, and by feeding them on such minerals as calcium and phosphorus, brought them back to productivity. Considerable effect has been noticeable in the milk yield when these animals have been fed shortly before lactation, especially from phosphorus. Disodium phosphate is the form used, which is fed with the grain.

Doctor Meigs is also making progress with his investigations of different kinds of proteins in ordinary feeding stuffs, to see which gives the best results in milk secretion. It has been noted for some time that certain proteins stimulate milk production more than others. This is found due to the fact that they are more productive of ameno acids than the others. As an example, he finds a certain amount of ameno acid in the blood system. He has analyzed the blood and found that the amount of ameno acid decreased as much as 34 percent in passing through the glands of a cow in milk, whereas with a dry cow there was no change in ameno acids, showing that in producing milk the ameno acid must be drawn on constantly, which indicates that a method of determining the ameno acids in different feeds may enable the feeder to replenish this element more quickly and more economically with one protein feed than another.

These investigations are undoubtedly fundamental and of great value, as they reach the basis of economic feeding for milk production.

It is evident to all who have given the subject attention that no State could undertake a big breeding project such as that in progress at Beltsville. It is a national problem and there is no reason why one State should carry on experiments equally beneficial to all parts of the nation. And it is also apparent that Congress is justified in appropriating funds for the study of breeding of dairy animals when you remember that the dairy cattle are worth over two billion dollars, and their product over three billion dollars annually.

If the economy of production largely depends on the amount of production per cow, and since breeding is the most important way of getting production, and economy of production will eventually help the consumers, then isn't Congress justified in spending money in the study of this problem?

At the present time the funds appropriated by the Government for this dairy cattle breeding project amounts to $8000. Imagine a corporation with over two billion dollars invested in its machinery, limiting its appropriation for promoting greater efficiency in production to this small sum. It is entirely too small for the work. In explaining the work and its scope Dr. Charles W. Larson, of the Dairy Division, says they do not want phenomenal animals, but must have good foundation stock. Funds are neded to buy certain animals possessing requirements essential to making the experiments. It is also necessary to keep the daughters of these animals to see what they do, and they must be kept on the Government farm to have uniform management. This means that the herd will grow; that it will be necessary to add new buildings and purchase larger quantities of feed.

Imported Guernsey, "Blossom Blue Bell of Ward Alva"

Many persons do not understand why the test farm isn't self-supporting. Mr. Larson says if they were permitted to sell their products in the market they could show a profit, not including the investigations. They have furnished to the colleges bulls that would readily sell for $4000 to $5000. The milk goes to the laboratories and in experimental work with dairy products, and all returns from sales are turned back into the United States Treasury. An appropriation of $32,000 was made for an experiment farm in Louisiana last year and it returned to the Treasury from sales $22,000. The Beltsville farm would show a profit if they were permitted to sell the milk and surplus animals, in spite of the fact that animals are kept in the inbreeding experiments which would be discarded by the practical dairyman.

While on a visit to the Beltsville farm I found in the large herd of Holsteins, Guernseys and Jerseys several animals of exceptionally high type and production. Among the number was the Holstein cow, Calamity Wayne Pauline 2d, the champion butter cow of Maryland, with a record of 22,547 pounds of milk and 855 pounds butterfat. Duchess Calamity Wayne is a fine young cow, milking 55 pounds with first calf. Four daughters of Piebe Laura Ollie Homestead King, a famous Minnesota Holstein sire, one of them Mercedes Laura Ollie, with a record of 20,000 pounds milk, 625 pounds fat, are in this herd. Little Gladis of Hillside, daughter of Hillside Torono, a Hood Farm Jersey sire, is one of four daughters of this bull at Beltsville, making a fine record. There are several herd bulls of excellent quality, and sires of high producing cows. The herd is under the able management of H. T. Converse, formerly of New Hampshire.

In addition to the investigations already mentioned, comparative tests being made in milking three and four times a day, in methods of stabling, stanchions against box stalls, and in calf feeding for the purpose of securing a home-made substitute for whole milk to replace the whole milk without the use of commercial calf feeds. The Beltsville farm specialists hope to be able to give out some definite results of these experiments at an early date.—Elmer E. Reynolds.

ADVERTISING MARYLAND'S MILK

That milk is a most desirable, important and nourishing food was demonstrated at the red and white house of the Maryland State Dairymen's Association, erected near Mt. Royal Station, Baltimore, May 26th.

Home demonstration agents and members of the Women's Civic League served milk in many styles to hundreds of people.

There were signs that read: "Use More Butter," "Use More Cheese," "Use More Milk," and there was one that bore the legend, "The Sign of the Cow," which was probably the name of the red and white house.

On this very day and as an important part of the demonstration an all-day meeting was held in Osler Hall. Here were distinguished men, noted doctors, who told of the absolute necessity of using more milk, and especially for children. Among the speakers were Dr. Hopkins, Dr. Sherwood, Dr. Welch and Dr. McCullom. Dr. McCullom has been having a group of school children make dairy products the most important part of their diet and told of their gain in weight and health.

It was rather amusing when one of the speakers told of asking a class how many drank tea, and almost every hand went up. Then he asked how many drank milk, and there were three hands. Every child should be drinking milk, and not tea.

Dr. Hopkins, by chart, showed how the milk of Baltimore has improved in three years, being on a par with the best milk of our country.

Modern methods of milking and handling milk was shown in a moving picture reel, "Milk and Honey." A little romance woven into the practical part of the dairy business made this film very pleasing.

The principal address was made by Mr. Maugher, Secretary of the National Dairy Council, on "The Food Value of Milk and How Best to Bring it Before the People." Mr. Maugher told very interestingly of milk advertising campaigns in other cities.

—Marylander.

THE MILKING MACHINE AND THE BACTERIAL COUNT

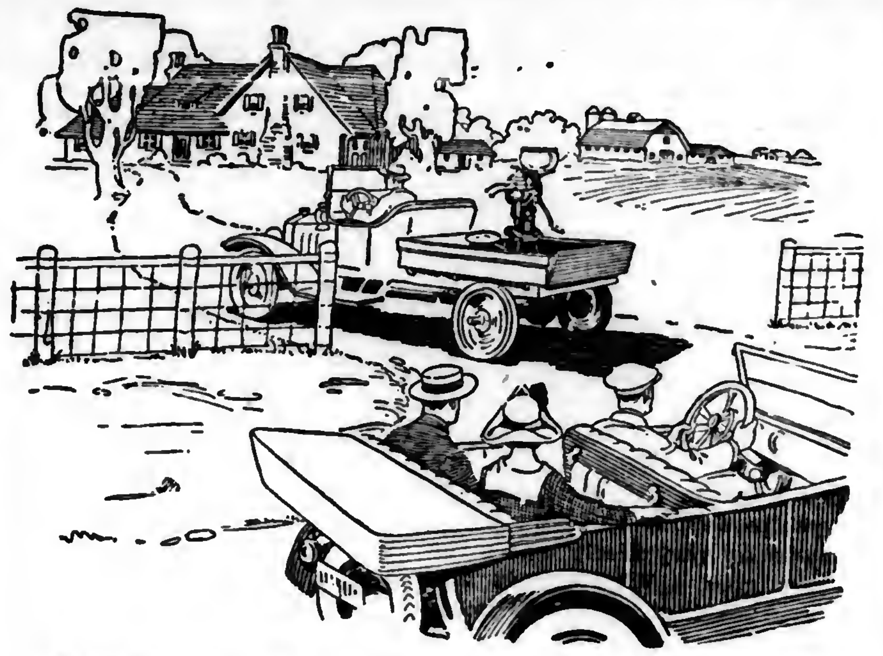
The grading of milk on the basis of its bacterial content has emphasized the fact that the milking machine is often a source of contamination due to the failure of the dairyman to keep the machine in a sanitary condition. Studies carried on at the Geneva Experiment Station, and observations made by the Station under actual farm conditions show that an excellent grade of milk can always be obtained with the milking machine if strict attention is given every day in the year to the proper cleaning of the machine and other utensils coming in contact with the milk.

The method of caring for the milking machine which has been developed by the Station and used successfully under farm conditions is one that can be readily adapted by every farmer to his own conditions with little, if any, added expense. The principal steps in cleaning the machine, each one of which is essential to the production of high-grade milk, are as follows: (1) A rapid but careful washing of the machine by drawing thru it immediately after each milking (a) a pail of cold water, (b) a pail of hot alkali water, and (c) a pail of clear hot water. (2) Immersion of the teat-cups and all rubber parts in a good sterilizing solution (chloride of lime) between milkings, allowing for the escape of air from the tubes so that the solution can reach all parts. (3) A thoro weekly overhauling of the teat-cups and tubes. (4) The daily scalding and thoro drying of all metal parts that come in contact with the milk except the parts kept in the sterilizing solution. Care should be taken that the sterilizing solution be kept sufficiently concentrated to be effective.

Have some flowers about the yard. A yard without flowers is like a plain dinner without some of the fixin's.

* * *

Some men who are confident they could conquer the world have difficulty in conquering the weeds even in a two by four garden.



It's a New De Laval

Many new De Lavals will be delivered to farmers this summer, and they will soon pay for themselves.

In fact, De Laval Separators pay for themselves many times over; and as the number of cows increases, it pays to buy new, up-to-date De Lavals of larger capacity.

The local De Laval agent will gladly take a new separator out to your place, set it up, and let it prove by its performance that it skims clean and is easy to turn and easy to clean, even under unfavorable conditions.

A new De Laval will pay for itself in a few months because of the cream it saves—and besides it saves labor and time.

If a demonstration is wanted, call the local De Laval agent. If you do not know him, write nearest office

The De Laval Separator Co.
165 Broadway NEW YORK
29 East Madison Street CHICAGO
61 Beale Street SAN FRANCISCO

A FARQUHAR Thresher will save you the expensive loss of grain in the straw. Our separating principle is backed by 50 years actual field service. Successfully handles all kinds of grain with light operating power. Design simple, easy to adjust, and long lived.

Illustration shows the Farquhar Rake Separator, a most practical and economical machine for the farmer who does his own threshing. Made in 2 sizes with average capacities of from 350 to 600 bushels of wheat a day. Suitable for gas engines 7 H. P. and upwards.

For merchant threshing, the Farquhar Vibrator, also Farquhar Pea and Bean Thresher, and Farquhar Peanut Picker. Special illustrated Thresher Catalogue free to agriculturists on request. You'll be helping conserve the grain by writing for copy today.

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Box 546, York, Pa.
Also Engines and Boilers, Sawmills, Cider Presses, Potato Diggers, Grain Drills.

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PAINT BARN PAINT $1.32 PER GALLON
Get Factory Prices on all Paints. We guarantee quality. We Pay the Freight.
FRANKLIN COLOR WORKS, DEPT. P,
FRANKLIN, IND.

SNYDER CO., PA.

Rains, accompanied by high winds, lightning, thunder and hail, were frequent in this section during the past two weeks. Some cornfields were damaged by cut worm and ants. Pasture is good and all livestock looks well. Large quantities of milk are shipped to Philadelphia.

Markets: Wheat, $2.70 bushel; corn, $1.80 bushel; oats, $1.15 bushel; rye, $1.80 bushel; middlings, $3.00 cwt.; chop, $3.50 cwt.; flour, $12.80 bbl. Fair crop of fruit with plenty of sugar at 28c lb. People generally well except some few colds and fevers.—S. D. D.

MIFFLIN CO., PA.

Weather has been very favorable this spring for farming; rather dry for good ploughing. Had no washing rains yet to destroy the corn fields. Corn came up very nicely where the seed was good. Wheat, oats and grass are looking fine, with some poor fields of each kind. Farmers are busy putting away alfalfa hay and cultivating corn. Prices on most all products are still going higher. Wheat, $2.75; corn, $2.00; oats, $1.00; eggs, 40c; butter, 65c; strawberries, 25c and 30c per box; new potatoes, 14c lb. Most kinds of fruit indicate a fair crop. Help on the farms still scarce. Some farmers are ploughing for fall crops; some work done on public roads with a small number of men.—J. H. Byler.

CUMBERLAND CO., N. J.

Warm, with showers. Frank P. Loveman sold tomatoes the first week in July for $7.00 a basket. Wheat is dead ripe and being harvested. John Dare had corn which would hide a horse by July 4th. Potatoes are lightening. The market for onions is poor. Eggs, 50c doz.; huckleberries, 40c qt.; cabbage, $1.25 basket. County Fair September. —C. J. S.

MIFFLIN CO., PA.

Weather ideal for haying and harvesting. Wheat and barley all cut and hay to make yet. Wheat a half crop; hay good. Some farmers selling at $25 a four-horse load. Corn and potatoes promising good crops; early ones ready to use. Market: Butter, 60c; eggs, 42c. Many cherries have been sold, some as high as 18c a qt. Farmers doing their work within themselves or with what few boys they can hire.—J. H. Byler.

ADAMS CO., OHIO

Showers of rain are frequent and plenty of moisture for all vegetation. Corn and tobacco making a splendid growth. Wheat crop very light and all in shock. Too much rain for the making of good hay. Oats promise a good yield. Very little help to be had for farm work. No sale for wool and farmers will hold until a fair and just price can be secured. Very little work being done on the public road.—Walter E. Roberts.

TIOGA CO., N. Y.

This county is the fifth to complete its quota, which is $18,000, towards capitalizing the new Grange League Federation Exchange, Inc. And it is believed when all the subscriptions are in that there will be a nice margin in excess. The promoters are confident that the $1,000,000 capital which they set out to raise in New York State, will be over-subscribed, and hope it will be.

W. N. Giles, master of the State Grange, was in this county recently at the dedication of a new Grange Hall in Flemingville, making the dedication speech, which with the other celebration of the event, made the day one long to be remembered.

Two successful demonstrations of up-to-date kitchen equipments and a household water system were given in Tioga County last week by Professor Riley and assistants from the State College of Agriculture, Ithaca, N. Y., and were well attended by an enterprising people.—M. I. C. A.

UNION CO., PA.

Hay is being made on most of the farms, though a few are still cultivating corn and are waiting for grass to mature more. Wheat is coloring rapidly and that is why hay is being cut at this time instead of waiting a week. In this section wheat usually is ready to cut by July 4th.

Hay crop is much lighter than last year, tho there are some very good fields of grass. Another reason for making hay early is because most farmers are short of help, so they started before grass was ready to be cut. Many hay loaders are in use to save hands and labor.

Corn is smaller than usual for this time of year but it is growing rapidly these warm nights.

Potato bugs are not so plentiful as other years and growers are pleased.

A hard storm, or cyclone, damaged five farm barns and two houses west of New Berlin on June 17th, but only one person was hurt and one calf killed. It is estimated that $25,000 damage was done in five minutes' time.

Teachers for country schools are not so plentiful as usual and some boards have trouble in securing satisfactory teachers, even at increased wages.

A great delegation of farmers visited State College last week from all sections of the State.

On three farms in this section there are thirty-six acres of stalks and stubbles which should have been seeded to oats or buckwheat, but are still unplowed on account of lack of help.—J. N. Glover.

FARM CONDITIONS IN SOUTHERN WEST VIRGINIA

The season has been from one to two weeks late ever since spring opened up and farmers are not hiring any help but just doing what work they can themselves. Owing to the high wages offered at public works there are no farm hands available at any price. The season has been very rainy most of the time and doing our best we cannot keep up with the work.

The apple crop in most sections is almost a failure as the late cold weather killed most apples or caused them to drop off.

Early wheat was injured with fly and rainy weather when ripening and late wheat was badly frozen out during the winter. The oats crop has made a good growth and with fair weather may make a good crop. Meadows look good and just a few farmers have begun hay harvest. The corn crop is late, much of it was planted very late. The crop looks fairly well but the wet weather has kept it from getting as much cultivation as it should have. The potato crop looks well and investigation shows large tubers for the stage of maturity attained.

The disposition of the farmers seems to be to grow as much of the necessaries of life as they can on the farm and thus beat the profiteering by doing as little buying as possible. Sugar is obtainable only at a very high price and the result is that not so much sugar is used. The high prices may have a tendency to teach economy and I feel sure that it will with persons who must be careful to make ends meet.

And while they apparently get good wages when it is considered that they do not get to work half time, it takes their wages to live and they must be careful in their buying in order to live within their incomes. This works against the farmer's market for his products.—A. J. Legg, Albion, W. Va.

PENNSYLVANIA MILK PLANTS

The Act of Assembly of the last session of the Legislature providing for the issuing of permits to milk plants buying or selling milk and cream on the butter-fat basis, and the licensing of testers working in connection with such plants, is being vigorously enforced by the Department of Agriculture.

The purpose of the permit is to make a matter of record every place in the State where milk or cream is handled; to determine the manner of conducting such business; to investigate complaints filed against such plants and to recheck all tests.

The licensing of testers employed in such plants insures proficiency in this character of work. The law requires every milk tester to take a rigid examination before he can qualify for such position and also supply two letters of good character from responsible persons, which safeguards the patrons of such plants from unscrupulous persons.

The Department proposes to recheck the tester's work for the benefit of both the management and patrons of such plants.

This law will establish a cordial relationship between these parties and promote confidence in their business transactions. The management of these plants have all been warned as to the requirements of these laws. Where the notices of compliance are ignored the Department will institute legal proceedings. Also where dishonesty is practiced in such plants the offenders will be prosecuted.

RAISING WHITE SWEET CLOVER

Please tell we how to raise white sweet clover.—A. W. B., Chester Co., Pa.

It is ordinarily a simple matter to grow white sweet clover successfully, but there are a number of points to bear in mind.

First of all you should make sure that your seed is pure, clean, and of good quality. It has a very hard seed coat and you should be particular to buy only scarified seed. There are three varieties of seed, all of which look very much alike, so that in buying you should specify white sweet clover and add the Latin name "Melilotus Alba" and see that it is not adulterated with alfalfa or yellow trefold seed.

The next essential is a firm seedbed well supplied with lime. The easiest way to sow sweet clover is on grain any time during February or March. On heavy soils this gives good results if the ground has been liberally supplied with lime before seeding. On light soils, which are likely to be loose, it is better to sow alone in order to pack the seed-bed firmly.

Twenty pounds of seed is sufficient and it should be inoculated either by the use of soil from a sweet clover or alfalfa field or by a good commercial culture.

It should be remembered also that sweet clover is a bi-ennial. If it is desired to keep it down several years it should be seeded two years in succession, tho one-half as much seed should be plenty for the second seeding. Spring seeding is considered preferable to summer and fall planting.

SOWING TWO-YEAR-OLD OATS

Please tell me, thru your columns, if oats are fertile when two years old. I sowed a field with two-year-old oats which weighed 40 pounds to the bushel, but they got all milky, rotten and failed to sprout. They looked good and had not heated at any time. My neighbor sowed one-year-old oats the same day and his came up and are growing nicely.—F. R., Bucks Co., Pa.

As a rule the germinating quality of oats decreases only slightly from year to year, provided they have been stored in a dry place with a free circulation of air. If your land was wet and moist they would be likely to rot, especially in the case of continued rainy weather.

It is always advisable to make a germination test of any seeds regarding which there is the least doubt. This is easily accomplished by placing 100 seeds in each of two or more saucers between blotters and then keeping the blotters moist for a week or ten days until the seeds have had ample opportunity to germinate. The saucers should be placed in a warm room. If the seeds germinate and show vigor they may be used for planting, if not they should be used for feeding purposes. Sometimes two-year-old oats will only germinate 75 percent. In such a case the amount used for seeding should be increased one-third. The same principles apply to all kinds of seed.

JULY OR AUGUST TIME TO SOW ALFALFA CROP

To start the alfalfa crop there is no better time than the latter part of July or the first part of August. Conditions favoring the growth of alfalfa are thoro drainage, an abundance of limestone, and inoculation with the necessary legume bacteria. If the soil shows any sign of acidity it will be well to apply 2 to 4 tons of ground limestone per acre.

From 300 to 400 pounds of acid phosphate or steamed bone is valuable for fertilizing alfalfa. Under these conditions only 10 pounds of seed of high germination test are required per acre. This may be broadcasted or drilled in shallow.

NEW JERSEY FAIRS, 1920

Town	County	Date
Mount Holly	Burlington Co.	Aug. 3
Belvidere	Warren Co.	Aug. 20
Flemington	Hunterdon Co.	Aug. 24-27
Mount Holly	Burlington Co.	Sept. 14-17
Branchville	Sussex Co.	Sept. 21-24
Morristown	Morris Co.	Sept. 23-25
Trenton	Mercer Co.	Sept. 27-Oct. 1
Bridgeton	Cumberland Co.	Not decided
Alcyon Park, Pitman	Gloucester Co.	Not decided
Cape May Court House	Cape May Co.	Not decided

DELAWARE FAIRS, 1920

Wilmington	New Castle Co.	Sept. 6-10

MARYLAND FAIRS, 1920

Cambridge	Dorchester Co.	Aug. 3-6
Pocom'ke C'y	Worchester Co.	Aug. 17-20
Salisbury	Wicomico Co.	Aug. 24-27
Timonium	Baltimore	Aug. 31-Sep. 6
White Hall	Baltimore	Sept. 29-Oct. 2
Hagerstown	Washington	Oct. 12-16
Bel Air	Harford	Oct. 12-15
Frederick	Frederick	Oct. 19-22
Cumberland	Allegany	Oct. 20-23

COCKEREL SELLING EXPERIENCES

We find that it seldom pays to hold cockerels beyond the broiler age unless they are to be saved or sold as breeding stock. It is better to market them and save the feed and housing room to use in developing the pullets. One day last summer our local dealer was paying 33 cents per pound for broilers. Within two weeks it dropped to 28 cents per pound. As a large number of broilers from late hatches began to arrive on the market the price naturally dropped.

The point is right here. When broilers are hatched early it pays to get them on the market as soon as possible, as their increase in weight at the present price of feed is not very profitable and the increase in weight is often more than balanced by the decrease in price. Broilers cannot be made very profitable under the present feed prices but they are a side-line which we raise while obtaining good pullets. Therefore, we feel that it is best to cash in on the broiler stock as soon as they reach three pounds in weight, which is the weight that our local dealers like best.

Cockerels for breeding stock should be culled rigidly. The trouble with the breeding cockerel business is the fact that most buyers with farm flocks wish to wait and buy their breeders along toward spring when they begin to think of hatching chicks. It is impossible to make a profit on cockerels that are fed all winter, if they are only sold at the prices some farmers are willing to pay.

This will be our plan in the future. Never keep a cockerel that is not good enough to sell as a breeder for at least $5.00 or more. There is no money in devoting winter housing space and winter poultry feed to cockerels which cannot be sold to breeders for considerable more than they are worth for meat. Soon cockerels will be scarce enough in the spring so that poultry breeders will purchase needed males in the fall and not expect to find them at low prices in the spring.

In culling the flock first band enough males for use with the home flocks. Band a few extra birds so there will be a surplus to allow for any unavoidable accidents or sickness that might occur or any birds that do not prove as vigorous as expected. Then market the next best cockerels that are good enough for advertising as breeders. Market the balance as rapidly as possible with due regard for the condition of the market and turn them into cash and save the range, the colony houses and the feed for the early hatched pullets, which have the best chances of returning profits of any feature of the farm poultry business.

When selling these surplus cockerels practically nothing can be done without advertising. A signboard by the road may help to bring a few buyers. An advertisement in the local paper will bring a few more. But the bulk of the inquiries and orders will come from advertising in the farm journals and they will come from farmers near small towns that the advertiser scarcely realized were in existence.

The price for cockerels sold as breeders must be accurately based on their quality. It is better to sell a $15 bird for $10 than a $5 bird for $10 and the poultryman should make a study of his breed and learn the accurate value of the birds he has to sell. The breeder must please his customers or he cannot build a successful business. It is best to estimate the value of birds accurately, but if there is any doubt it is better to underestimate the value of a bird than overestimate it.

Male birds of doubtful quality are best sold as broilers. The others must bring a fair price to be profitable if they are held until maturity. They represent the cost of their feed, the work and skill of the breeder, cost of advertising and correspondence, the shipping crate and the cost of delivery at the express office. By figuring up the charges against the bird it is evident that cheap stock cannot be sold as breeding stock at a cheap price. It is necessary to have quality birds or the males are better sold as broilers when they reach the broiler age.

When they are ready for sale as broilers study the markets. Find the local dealer's price and the price offered by commission dealers in nearby market centers. Study the chances of selling to private customers or the hotel trade. Just because the broilers are a sort of side-line they must not be sacrificed for a cent less than their value. The chances for profit with the best of salesmanship are none too large and do not make the poultry producer a profiteer.

R. G. Kirby.

Fresh, Infertile Eggs, Gathered From Clean Nests, Bring Topnotch Prices

SUMMER THOUGHTS FROM THE POULTRY YARD

No poultryman can afford to neglect the study of his fowls and of the conditions which relate to their practical management. It is only the man who endeavors to inform himself regarding the various breeds and their characteristics, as well as of the art of feeding and caring for the fowls, who will have any marked degree of success. There is always something to learn. What may be the truth today may be an error tomorrow. Each bird differs from the others in the flock and there is often far more difference between individual fowls of any breed than there is between distinct breeds. Therefore individuality and environment have to be considered. There is room for great improvement among the fowls of each established breed, but it is largely by the study of individual birds that real progress in improvement is made.

* * *

The feeding of charcoal will promote health in any flock of chickens. It will not perform miracles, of course, but when the fowls have good management the feeding of charcoal will often result in the correction of minor troubles caused by little irregularities in feeding. It also stimulates the appetites of adult birds. Especially is powdered charcoal to be recommended for use in the mash mixture for growing chicks, since it will tend to correct derangements of the digestive organs brought about by improper or irregular feeding. There are different brands and sizes, including powdered charcoal, on the market, so the poultryman can buy it either to feed in the mash mixture to chicks and old birds or to keep before the fowls all the time. The coarse ground charcoal, about the size of the average grain of corn, is perhaps the best grade to get for the older fowls, and it may well be kept in the henhouse in a self-feeding hopper so the birds may help themselves at will.

* * *

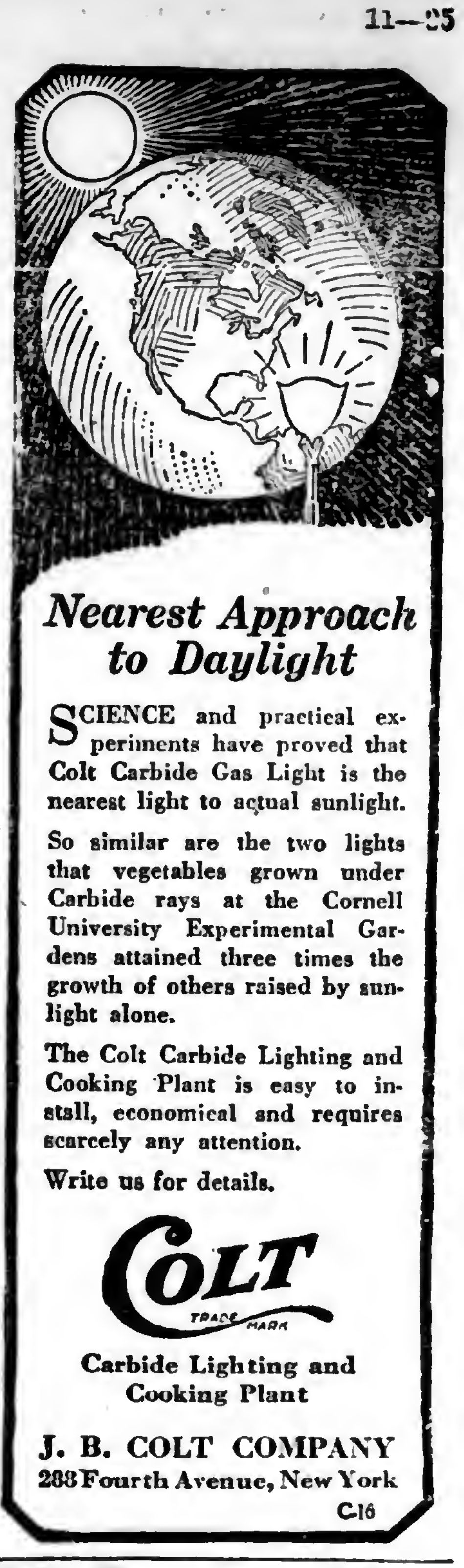
Hens should have access at all times to a supply of grit or sharp stones of a size small enough to be swallowed readily. Grit is required by the hens to help in grinding in their gizzards the hard grains which they eat. A supply of ordinary gravel will answer the purpose of grit very well if many of the small stones are sharp. Smooth pieces of gravel are of little assistance to the fowls, for grit must be sharp enough to cut as well as grind. Sand is neither coarse nor sharp enough for exclusive use as grit. Crushed oyster or clam shell also should be furnished the hens. If it is withheld the hens are likely to lack sufficient shell-forming material in their food, with the result that they lay many soft-shelled or thin-shelled eggs. Grit and shell can be purchased at any feed or poultry supply store.

* * *

Some of the burlap feed bags that regularly find their way to every farm can advantageously be utilized in covering ventilating frames in poultry houses. The burlap is really a better material for the purpose than either muslin or duck, for when damp and covered with dust it does not become impervious to air as do the other fabrics, but admits a steady flow of fresh air at all times.

* * *

Sparrows are very diligent in seeking places where they may obtain food regularly. They frequently are a great nuisance to the poultryman, even when all feeding is done inside the henhouse, unless all window and curtain openings are covered with poultry netting, which will prevent the entry of the little pests into the house. Not only do sparrows consume a great deal of feed, foul the feed and water containers, and make the premises generally dirty, but they also carry disease germs from one flock to another.—W. F. P., Ind.



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FRUIT MARKET PROSPECTS.

By J. P. STEWART

The growers who are fortunate enough to possess good crops of fruit this year are beginning to wonder what the prices are likely to be as compared with last year. In view of the distinctly higher prices of everything entering into their production, from labor and spraying materials to packages, there can be only one answer as to what direction any possible changes in the price of the final product should take. It also appears that there is an unusual amount of unevenness in the present crop, especially in the case of peaches, and that there has been an unusually heavy "June" drop practically everywhere, so that the actual amount of fruit available in the country as a whole is still in considerable doubt. The general impression, however, is that the total crop of peaches will at least be no larger than last year, and it is likely to be considerably less.

The relative prices secured on the early shipments of peaches from The South also seem to indicate rather better prices for good fruit this year than last, as such fruit has been bringing from 50 cents to a dollar more per carrier than at the corresponding period last year. The present very unsatisfactory shipping conditions, moreover, can hardly avoid resulting in distinctly higher prices to the average consumer, whether the grower gets them or not, as important losses of such perishable products as peaches are practically certain to occur.

The Advantage of the Home Market

Under the present conditions the great advantages of the orchard with a large and dependable home market are evident. This is at least one respect in which the commercial orchard that is somewhat out of the more highly developed fruit sections is likely to have an important advantage. We are accustomed to hear all sorts of claims made for the home markets in various parts of Pennsylvania, but we seldom find anyone who has really used such markets for disposing of large crops of fruit. We recently encountered one large grower, however, who has marketed as high as $27,000 worth of fruit in a single year to parties that came right to the orchard for it, and who expects to do the same thing with around $50,000 worth this year.

The increase in the number of automobiles and in the amount of good roads in the State, along with a little judicious advertising, will undoubtedly result in a large development in this kind of trade. From the fruit grower's viewpoint such a method of reaching the consumer directly is far better than the curb or city market, as it takes so much less time, and time is rather scarce and expensive just now. It may not solve the problem of getting cheaper food to the poorer classes in the cities so well as the other types of market, but they will probably be taken care of sufficiently by those who have to ship their fruit or else attend these markets themselves. For all those properly situated to take advantage of the possible trade at the orchard, however, we believe that this will be highly desirable this year and especially so in the case of peaches.

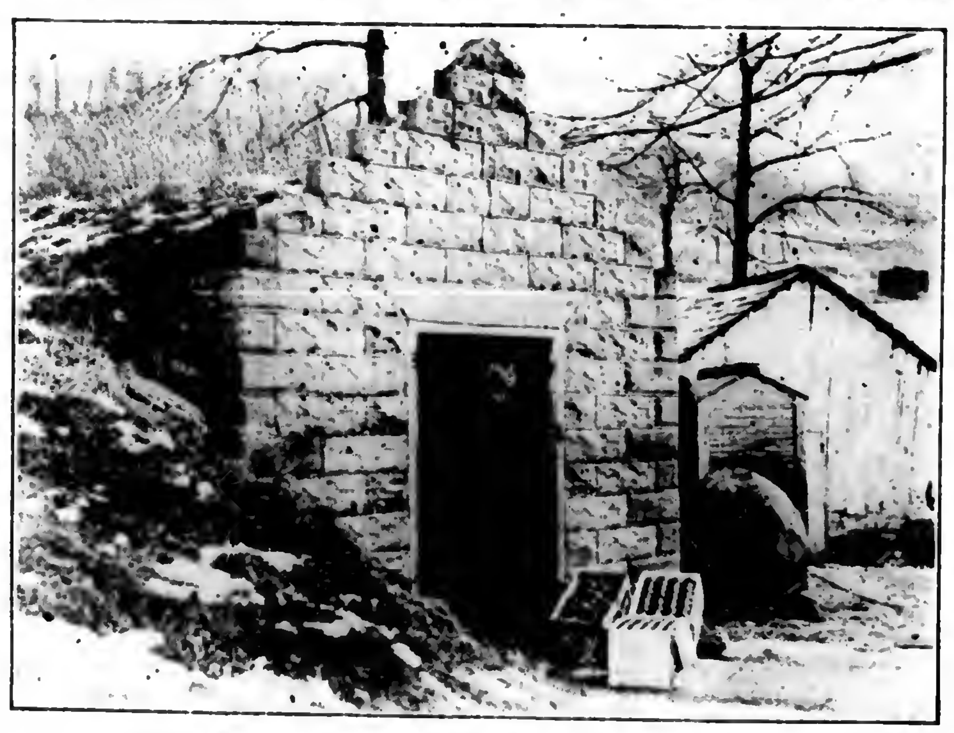
Drying May Be Needed Again

In view of the scarcity and high cost of sugar for the home canning of fruits, the drying method of preservation is likely to come into extensive use again this year. Fortunately, abundant directions for doing this most effectively have been prepared by many of the State Colleges and Experiment Stations and also by the U. S. Department of Agriculture, so that no one need be without expert advice on this important process. It is also likely to be worth while to call for such advice, regardless of one's previous experience in the process, as it is a rare individual who cannot pick up at least a few valuable points from these directions.

Some of the important advantages of the drying method are that it avoids the expense of glass jars or similar containers and also enables one to save many little lot of fruits and vegetables which may be left over from some other operation that it would not pay to attempt to can. Drying also develops or retains a flavor in certain fruits and vegetables that can hardly be secured in any other method of preservation.

Front of Daniel Rice's Storage House and Three Boxes of His Packing

Formerly one of the objections to home drying of fruits and vegetables was the fact that the freshly cut material when exposed to the air immediately became brown in many cases, which greatly injured its looks. There was also no definite knowledge of the right amount of heat to use for best results, nor the proper stage of dryness to be reached in the different materials, nor the best way to keep the products after they were properly dried. All this is explained in the directions now available, but it may be well to call attention to one of the most important steps in the process, viz., the matter of blanching.



Home Storage Cave of Daniel Rice, Perry County, Pa.

Proper blanching prevents the brown discoloration, sets the natural colors, kills the germs that might otherwise start decay, hastens the subsequent escape of the moisture, and aids in retaining the natural flavor. The blanching is probably best accomplished with steam, altho boiling water may be used in the case of most vegetables, but not with fruits. Horse-radish is an exception, however, as any kind of blanching destroys its flavor. It is important not to overdo it in any case, and the main thing is merely to heat the product thru. Detailed directions for it, including the approximate period for each article, however, are given in any good set of directions and hence no further details will be attempted here. It may be said, however, that the discovery of the value of proper blanching has had much to do with the return of home-drying to general popularity.

Proper "curing" after the drying, reheating to about 140 degrees Fahrenheit just before storing to kill the eggs of the Indian-meal moth, and proper packing and storing, are the final items in attaining complete success in the drying process. Even after this an occasional inspection to see that all is well is not a bad idea.

Budding and Keeping Out the Borers

The high prices now being asked for nursery stock are apparently reviving interest in the budding process and in the handling of seeds and pits for developing the required stocks. In this connection it may be of interest to state that budding may be done almost any time during August, and in many cases may be continued for a few days in September or so long as the bark can be peeled readily. The details of the process may be obtained from any good book or bulletin on tree propagation, and has already been described sufficiently in this column.

The present special interest in the borers has probably developed from the recent annual campaign against them, in which their usual serious damage has again shown up in many cases. In the case of the apple the writer knows of nothing any more satisfactory for keeping the borers out than a good coating of pure raw linseed oil and white lead paint, mixed thick enough so as not to run on the trunks. This coating has also given very good results in preventing damage from the kinds of mice that work above ground chiefly, even when applied only every other year. For the borers this coating should be applied every year wherever conditions are very bad, and if they should be in the best of shape from June 15 to September. These coatings sometimes roughen the bark considerably, but where only the pure materials have been used we have never seen any real damage to the trees. They will not relieve one of the necessity of annual examinations, however, until the practical absence of the borers has ben proved.

In the case of the peach, the best coating that the writer has had any experience with is a dense lime-sulphur solution, more or less mixed with the sludge left in making the home-made concentrate. This is the only satisfactorily adhesive coating that the writer has tried, which has not injured the peach. It is not always as effective in keeping the pests off, as might be desired, but usually does some good if kept in good shape during the same period as stated above. If any of our readers can suggest anything better which is known to be safe, we would be interested in hearing of it.

CHAMPION APPLES

Perry County, Pa., that held the championship for growing some of the finest apples in Pennsylvania in 1918, won laurels again for 1919 at the Fourth Annual Products Show at Harrisburg in January.

The apple exhibit was a fine one. Pennsylvania has engaged in the apple-raising business on a large scale and there's no reason why it should not become one of the largest apple-growing states of the Union. To Daniel Rice, of near New Bloomfield, Perry County, Pa., goes the credit of having done more to bring laurels to his county than any other single individual. About fifteen years ago Rice took up the idea of going into the apple-raising business. He took over a small farm a few miles west of New Bloomfield. It was located on a barren hillside. When he said he was going to grow apples on this tract of land people in that section smiled. Today the apples grown on this land are shipped all over the country.

This man made a thoro study of growing good apples. He blasted the ground, set out trees and year after year he carefully watched and attended to them, spraying, pruning and cultivating. The cold storage warehouses play an important part in the apple-growing industry, and Perry County not having a place of this kind, Mr. Rice dug a mammoth cave back in the hillside on his farm. It is 50 feet deep and 8 feet high, and in this storage house Nature attends to the preservation of the fruit grown on this farm.

Neighbors seeing the success of Mr. Rice, became interested in the apple-growing business and the Perry County Fruit Growers' Association was organized. Following the example of Mr. Rice apple growing was taken up on a larger scale by the farmers of this county and now it is famous.—E. Ellsworth Claspby.

DO NOT OVERSPRAY FRUITS

Growers of apples and pears especially are cautioned by the United States Department of Agriculture against excessive applications of spray mixtures for the second brood of the codling moth. This is now in progress or will soon begin in the central and northern tiers of states.

The high market value of fruit products warrants careful attention on the part of growers to the various orchard operations and especially to spraying. The Department feels, however, that necessary protection from insects can be secured without danger of leaving spray residue on fruits at harvesting. Careful directions for spraying have been given out, which if followed, will protect fruit from insects without leaving an objectionable residue.

Some injury to the fruit-growing industry resulted last year from the seizure by certain health officials of fruit showing considerable spray residue. While it is generally recognized that spraying is an absolutely essential part of fruit growing, the Department feels that carelessness in making the summer applications may result in undeserved loss to growers of fruit thru fears of the public caused by the few exceptional instances in which oversprayed fruits may reach the markets.

FALL SPRAYING CONTROLS PEACH LEAF CURL

Satisfactory and effective control of the destructive fungus disease known as peach leaf curl, is more readily secured by fall spraying than by treatments at any other time of the year.

Several reasons conspire in favor of fall treatment, namely, greater ease of hauling spray outfits in the orchard, less rush of work at that season, spray outfits are usually in working condition, but best of all is the greater control of the disease.

Experiments carried out by the Bureau of Plant Industry, Pennsylvania Department of Agriculture, show reduction of leaf curl disease by fall spraying to only 8½ percent of infection, while 60 percent of disease showed on spring sprayed trees using the same strength of lime-sulfur solution.

EASTERN SHORE STRAWBERRY RETURNS LARGE

Wicomico County strawberry growers have deposited in the county's banks $650,000 from the season's crop. About 90,000 crates were shipped from the various berry sections of Wicomico and were sold on an average price of $7.50 for a 32-qt. crate. Each carload shipped represented a value of about $2000 as there are 250 crates to a carload.

Two hundred and ten cars of berries were shipped from this county on the Baltimore, Chesapeake and Atlantic Railroad. It is estimated that these shipments aggregate 52,500 crates and brought in about $393,375. All the berries were not sold to outside dealers by any means. In Pittsville, a shipping point, twenty-five carloads were sold to local canneries and preserving houses.

—Marylander.

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FREE DELIVERY A MISNOMER—SHOPPER PAYS COST IN END

There is no such thing as free delivery for the shopper, specialists of the Bureau of Markets of the United States Department of Agriculture shrewdly point out. It may be free in the sense that the customer does not make a separate payment for that item, but each delivery costs the merchant a definite sum, and to cover this cost he must put a higher price on his commodities, and the customer pays, though indirectly, for the service.

Market baskets are in style nowadays, and it is one of the wholesome signs of the age that people are breaking away from the idea that a perfect lady or gentleman never carried a package. Now they are carrying home not only food supplies, but other articles as well. Where the cost of delivery has been eliminated from the stores' prices persons so situated that they can take advantage of the fact and perform their own delivery services can often make appreciable savings.

DEMONSTRATING FARM HOME CONVENIENCES

To show the farm families of New York State how some of the home conveniences, such as running water and bathroom may be enjoyed in any farm home is the purpose of a novel demonstration truck which the State College of Agriculture at Ithaca will send thru most of the counties in the State this summer. The demonstrations are being arranged thru the farm bureau agents.

On one small motor truck are carried all the materials such as pipe, sink, hot water tank, pumps, faucets and the like for the demonstration, as well as materials for setting up an open framework of one corner of a two-story house.

The water system will be progressively developed from a simple pump at the kitchen sink thru an arrangement whereby the pump and a gravity tank may be made to supply hot water, up to a complete modern system with toilet and a lavatory on the second floor of the house.

These systems are all actually built up before the eyes of the spectators—tanks, pumps, faucets, piping and all the rest. Outside the open framework of the house will be staked out finally a septic tank and a model of the tank will also be shown and explained.

WHAT ARE NORMAL YIELDS?

In explanation of what is meant by a normal yield of the various crops, L. H. Wible, Director, Bureau of Statistics, Pennsylvania Department of Agriculture, says:

"Most farmers know from experience approximately what their fields ought to produce with the usual modes of farming, with normal weather conditions and without unusual loss from disease, insects, or other adverse influences. The yield per acre under such favorable, though not extraordinary conditions, would be a normal yield, which is more than an average yield, but less than a maximum possible yield. A condition which gives promise of a normal yield, as thus described, is a normal or 100 per cent. condition. A normal yield for one farm or section may vary widely from that for another. On one field a normal yield per acre of corn may be 80 bushels, and in another field on the same farm 40 bushels.

THE FARMER AND HIS MONEY

The other day a neighbor came to see me in regard to investing a sum of money which had just come into his possession through the sale of a town property. He told me he had been given an opportunity to buy "treasury preferred stock" in a corporation in a western city that was to place an automobile on the market that would make all the present popular cars look like "also rans" at a country fair. The agent who had him for a prospect told him the stock would pay dividends of 8 percent a year, with an excellent chance of participating in the "excess profits of the common stock up to 3 percent."

My neighbor was enthusiastic in regard to the stock offering and the possibility of 11 percent on his money looked alluring. He is a hard-working, practical farmer, who had borrowed money on occasions from the local bank at 6 percent and he knew how hard it was to make up the interest from his stony, hillside farm. To him 11 percent on his investment loked like a Standard Oil handout.

They are a persuasive and persistent lot, these sellers of wild-cat securities and if we farmers had their gift of gab we would have no trouble in convincing the city people that eggs are worth a dollar a dozen the year round. Hardly a week passes without a visit from one or more of these get-rich-quick promoters. The war loan drives have turned the attention of farmers to bonds as a good form of investment, altho many of us bought the issues thru patriotism and not because we had loose change to invest.

The Harvest is the Heavy Season on Farm Teams

The articles which appear in the big city papers from time to time telling about the way in which the farmers are rolling in wealth as a result of the high prices for farm products have caused the bond salesmen to look upon us with hunger in their eyes as a class to be separated from their wealth. They come out to see us in high-powered cars and with diamonds on their shirt fronts. They importune us to invest in most everything, from a hole in the ground to a sugar plantation in the island of Java, or bonds of German cities.

I have never posed as an expert adviser on financial matters to brother farmers, but I recalled to my neighbor the experiences of several farmers in our vicinity who had invested in stocks which had great possibilities, but which turned out to be worthless. A few years ago a large plant for making rubber tires was built in a town a few miles from us. Agents went around among the farmers offering stock in the company and telling of the glittering prospects for its future. About that time one of my neighbors sold his farm at a good price and he was persuaded to invest his money in the rubber plant.

He bought $6000 worth of the stock about three years ago and it has paid only one dividend. This victim of misplaced confidence has secured a job with the plant of which he is a stockholder, driving a motor-truck for $18 a week. He still has his stock, altho he has been offered $1200 for the paper for which he gave up $6000, the savings of a lifetime of hard work and economy.

I also reminded my neighbor of the bright future that was predicted for an automobile company which built a plant in the same town a few years back. This car was a high-priced one and won several races, including the Fairmount Park race. Many people in this neighborhood invested in stock of the company and lost every dollar. The automobile and the company are both out of existence, and tucked away with deeds and insurance papers in many bureau drawers are finely engraved certificates that are worth only the paper they are printed upon.

Still another local corporation, a plant making stoves, succeeded in getting the hard-earned savings of many farmers when it was an infant industry. It has grown considerably since and everyone connected with the plant appears to be prosperous but the stockholders. The board of directors and general manager ride about in expensive cars and draw down salaries on which they pay an income tax. The stove molders are drawing from $8 to $10 a day and working eight hours for it. The stockholders alone are the only ones who have been overlooked in this prosperity and the company has not paid a dividend in a dozen years.

When a man goes out to buy a horse he usually takes an expert or a veterinary along with him. When he wishes to purchase an automobile he is apt to seek the advice of a friend familiar with the various makes of cars. It is the same with the purchase of a cow or a pair of hogs—almost any kind of property with which he is not familiar. Why is it, then, that so many people, otherwise well balanced and cautious, will jeopardize the savings of years when buying securities? The answer probably lies in man's ever-present gambling instinct and the hope of "getting rich quick."

Almost daily the newspapers recount the failures of fly-by-night concerns, mining companies, oil companies, rubber tire companies and others, with the consequent wiping out of the nest eggs of many little stockholders.

LIGHTING SYSTEMS FOR THE FARM

(Continued from Page Five.)

will permit no excessive flow of current such as is encountered in short circuiting.

There are types of plants which have the engine, generator and switchboard all as a single unit. Then there are others which have all units separate, the claimed advantage of the latter being that the engine may be used for other purposes. This is an advantage but it is one which works against the good of the system because of an excessive strain frequently put on the batteries.

Most companies which manufacture the system as a unit can supply a motor at a small additional cost which may be attached to any small machinery such as a forge, a grindstone, a milking machine, cream separator, pump, or washing machine. These motors obviate the necessity of moving the engine and are much more readily handled.

Considering the advantages of an electric system over kerosene, acetylene or gasoline, the following features stand out prominently. First, safety. It is the safest system of lighting known. Second, cleanliness—a fact which every housewife appreciates. Third, it gives a steady light, not too bright, and one which cannot blow out. Fourth, flexibility. It can be moved or conducted anywhere with perfect ease. Further, it can be used for heat for ironing and cooking in the house and for soldering in the tool house. Still further, it can be used for power both in the house and in the barn. Lastly, the upkeep is low if the system is properly cared for.

The disadvantages are, high initial cost, rather complicated, and absolutely cared for. However, everything taken into consideration, electricity is the ideal means of illuminating the country home.

Following is a table showing relative costs of the various systems of farm lighting based upon prices for the year 1917, on a 40 candlepower lamp burning 1000 hours, or two 40 candlepower lamps burning three hours each night for a period of six months, or about nine ordinary coal oil lamps during the same period.

Kind of Lamp	Cost
Gas, with mantle, gasoline at 20 cents per gallon	$0.49
Electric Arc Lights, 10 cents per kilowatt hour	2.82
Kerosene lamp with mantle, kerosene at 12 cents per gallon	2.88
Electric Tungsten lamp, 10 cents per kilowatt hour	5.00
Acetylene light, carbide at 4 cents per pound	6.68
Kerosene lamp, flat wick, kerosene at 12 cents per gallon	13.75

The original cost of installation for this equipment at the same time was about as follows:

Acetylene	$150 to $500
Gasoline	25 to 500
Electricity	250 to 600

WHAT SHALL THE HARVEST BE?

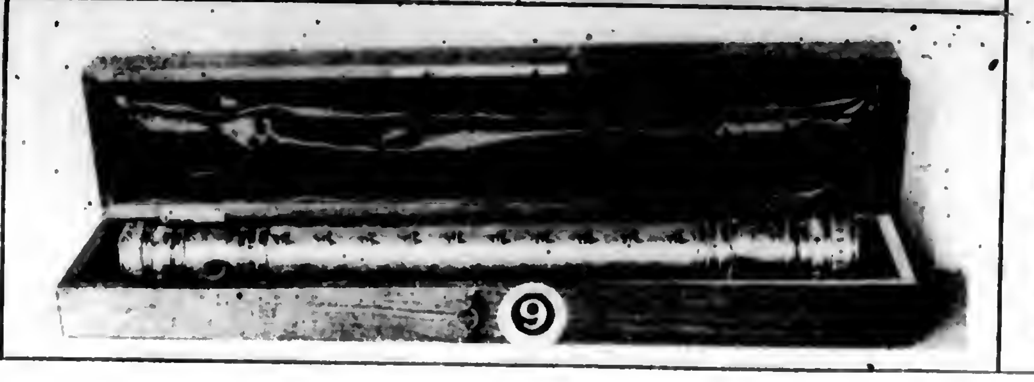
(Continued from Page Three.)

their powers in such an endeavor are indefinite and will be effective only temporarily, if at all.

Abnormal and intricate problems also await solution within the United States in connection with the marketing of wheat. The strain in credit will restrict buying. The shortage of cars, however, is hindering the movement, which has not started in the winter wheat belt, in the volume normally witnessed during July. The movement thus far has been rather scant. While industrial conditions in the country at large should be felt sooner or later in a slight increase in the supply of railroad equipment, no great movement of the grain during the summer seems likely. Farmers who are arranging to store and stack on their farms on account of the influence of transportation and credit conditions may in the end assist in maintaining a more even range of prices for their crop.

—Sanders Sosland

PASSING EVENTS IN PICTURES



(Photo. Copyright by Underwood & Underwood.)

1—"Trails End," the home of Governor James M. Cox, of Ohio, near Dayton.

2—Washington home of Senator Warren G. Harding.

3—Governor Cox, Democratic Presidential Nominee.

4—Senator Harding, Republican Presidential Nominee.

5—Opening of Democratic National Convention, showing the Delegates just after seating.

6—George Sissler, first baseman of the St. Louis Americans, who is leading the American League's Batting Procession.

7—Tilden, who won the International Tennis Championship.

8—Sergeant E. Carolina, winner of the 56-pound weight and 16-pound hammer throw at St. Louis Olympic Try-outs.

9—Baton presented to Marshal Foch by Knights of Columbus.

10—Alice Wainwright, 14 years old, of New York, whose swimming ability is attracting wide attention.

HOUSEHOLD

RE-COVERING AN UMBRELLA

I have a neighbor who is very ingenious in unusual ways. I think it is often her exactness and nicety of proportions which make what she does in the way of make-overs so attractive. She had an umbrella frame too good to throw away, but the old silk was worn and split and she wanted a new sun umbrella. Not knowing just how to reckon the exact amount of material needed she took a pointed section of the old silk umbrella cover to town with her and after telling the salesman what she wanted they laid the pointed piece first along one selvage edge, then the other, calculating as they measured. As no two umbrellas might be the same size it seems a good idea, altho, I think to buy one-half the amount of the measurement of the umbrella's circumference and allow for the proper number of finely hemmed edges of the sections at the sides would answer.

Before Covering the Old Umbrella

Mrs. C. says it isn't difficult to re-cover an old umbrella if one is very careful not to pull or stretch the sides of the old section used as pattern. One must make the hems the very tiniest possible on the sides of the sections, and observe just how and where the old cover was fastened. Even the top is not difficult to finish in a very presentable manner. The home-covered umbrella here photographed has a little shirred piece of black grosgrain ribbon put on over the finished center top. This covers up any little discrepancies of the home manufacturer in the way of fastening stitches, etc.

A bordered silk may be used for the umbrella cover, or silk ribbon can be sewed on carefully for a border.

The ribbon here used was made a part of each section just as if the material was bordered. That is, careful measurements were taken as to the length of the sections from center to top to selvage edge. The top of each section was of striped silk, having a selvage edge; next came a border of reseda ribbon, and after this a narrower border of black grosgrain ribbon, the same grosgrain ribbon being used in the little shirred "wudge" at the center top.

There are lovely "unintentional" borders on many silks and satins, and the two-color silks with the inside of one color and outside of another appeal to me as being the most practical umbrella coverings for the home manufacturer's first venture. I mean to make a cover of black silk, thus faced with emerald green. Taupe with blue inside would be pretty. I saw some lovely two-color silks just the other day when I was shopping in town that would be nice for this purpose.

If you look over your old umbrella frames you will no doubt find among them one or more that are well worth a venture such as Mrs. C.'s. And if she could do it, and I know positively that she did, and that this is the bona fide photograph of the home-done umbrella, then you or I can likely do what she did. I'm going to try it.——The Make-Over Lady, Broome Co., N. Y.

WAYS FOR NEW BEETS

Beets must be matured quickly to be tender, sweet and good for table use. Such beets may be cooked tender in one-half to one hour.

Rinse the dirt from beets without breaking the skins or roots. Leave on at least two inches of the tops to prevent them from bleeding while cooking. Put them to cook in boiling water and keep them boiling gently until tender. If available, use soft water. The water should completely cover the beets and put a cover on the kettle.

Use only one large beet when testing with a fork, for breaking the skin of a beet makes it lose color; so also does over-cooking. When the beet being tested is tender remove all from the stove, drain off the water and plunge the beets into cold water to permit handling while slipping off the skins.

Salt and add other seasoning after the skins have been removed.

Popular Beet Salads

Buttered and pickled beets are familiar to most Americans, but beets prepared in other ways are popular in many localities. Beet salad is one of the best selling salads in New York cafeterias. It is made of boiled beets served on lettuce or in combination with cucumber, onion, or string beans, and dressed with French, boiled or mayonnaise dressing.

Beet Soup

Beet soup is made of thickened milk to which beets are added. For one cup milk use one-half tablespoon butter, one and one-half tablespoons flour, one-sixteenth teaspoon salt, a bit of pepper and a slice of onion if liked. When the milk has been thickened and seasoned add one-half cup chopped boiled beets. This soup has a pink color when made of red beets.

Yellow or sugar beets are excellent cooked and prepared for service like red beets.—Edith Allen.

TO KEEP FREE FROM FLIES

While we cannot eliminate all flies, the following precautions will reduce the pests and thereby remove the danger that they bring.

First, have no litter around the yard. Burn all refuse that is not available for feeding something, and keep the latter in a covered vessel.

All outdoor toilets should have a pail of slacked lime or of road dust or dirt from the field setting in a corner with a shovel in it and everyone should be instructed to put a shovelful of the dirt into the toilet whenever excrement is made.

Leave no pails, cans or open dishes around to catch rain and become polluted and breed mosuitoes and call flies.

Keep the fowls away from the house. Do not let them make the porch and the steps a roosting place during the day.

If you knew the comfort of a screened-in kitchen porch you would not be without one.

If your backyard is kept in a sanitary condition it will not only be more comfortable to look at but much more healthful. Some housewives who are neat in every other particular will empty peelings, corn husks, pea pods, etc., in the backyard. There is no excuse for this on the farm where there are animals enough to eat them with profit. And if you have nothing to eat them, why by all means bury them to make humus in the soil. Thus you may save some illness in your family, because flies breed in decaying matter and carry disease germs on their feet to the food that they get a chance to crawl over.—Mrs. Dana Burchard, Tioga Co., Pa.

SUMMER HOUSEKEEPING HELPS

To Keep Bread Fresh

Wrap the loaves in wax paper before putting in the bread box. And if there are a few slices left after the meal pile them closely and wrap the same way and they will keep moist enough until next meal.

If you have an extra quantity of bread on hand that is likely to get stale, slice it and toast thoroly, and when cold set it in a dry place. To use it heat a little milk to near boiling, put in the toast and let stay on the stove just barely long enough to become hot and soft as you like it.

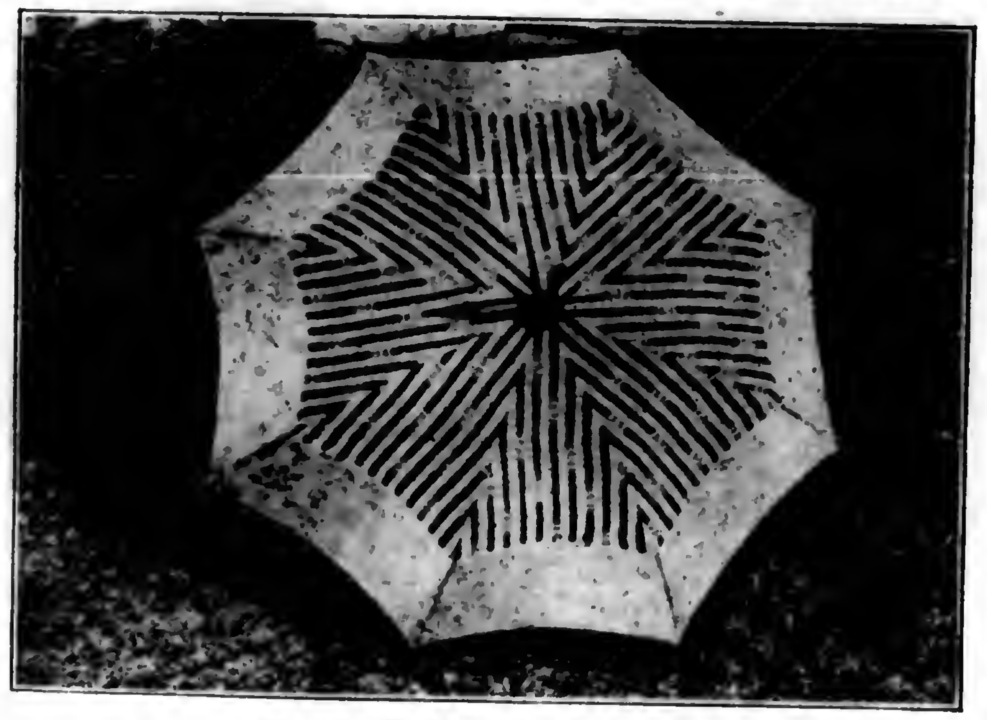
When You Are Without Ice

When you do not have ice you can keep milk cool and fresh better if you will set it in a covered utensil, on the cellar bottom. Butter can be put in a stone jar, covered tightly, and set on the cellar bottom and thus be kept cooler than on a shelf in the cellar.

Keeping Extra Food

To do away with the waste that results from the left-over food sometimes molding or spoiling in hot weather before we get it eaten, I keep some glass cans handy and when the hot food is dished up for the meal I put the surplus into a can, seal it up and set aside to use for another meal. I very often do this with rhubarb, prunes, apples or other fruit for sauce, because it saves time, since I can cook enough for a few extra meals with some less labor and heat than for one meal. I leave out enough for one day and thus never have any spoil.—Viola M. Lee, Broome Co., N. Y.

BED MUSLIN ECONOMY



After the Home-made Job Is Done

In these days of costly cotton cloth we have to make the sheets and pillow cases last as long as possible. As muslin sheets that have been mended until they are too poor for any further use as sheets are nearly always still fairly good on the outer edges, I tear off a strip 20 inches wide from each side, double the strips crosswise in the center, sew up the sides on the machine, cut off the old hems, which are nearly always considerably worn, make new hems, and get

a pair of pillow cases that give me considerable service. I use long stitches so it does not take long to make them.—Viola M. Lee, Broome Co., N. Y.

LABOR SAVERS

There is no place where labor-savers pay better than in the farm home and where they are, as a rule, more sorely neded. Of course, some of the outdoor equipment is more immediately renumerative and so always seems to come first, but when the wife reaches the point where the remainder of her life must be a series of doctor's bills, both she and her husband are likely to realize too late that the few dollars spent for a bread mixer would have paid better interest than the many dollars that went into the manure spreader.

My husband always had plenty of machinery outside but he never in his life refused to buy me absolutely any article I wanted in that line that was needed for my work. I believe my kitchen cabinet ranks ahead of my bread mixer. If I had no bread mixer we would be obliged to buy our bread, but if I had no cabinet I couldn't keep house. I bake eight big loaves of bread twice a week and I never could handle so much in the old way. My cabinet stands beside my cook stove and I keep a small quantity of all common cooking supplies right there so that if I want to mix a cake or a pie or a pudding I stand in one spot during the entire process and one step reaches the stove.

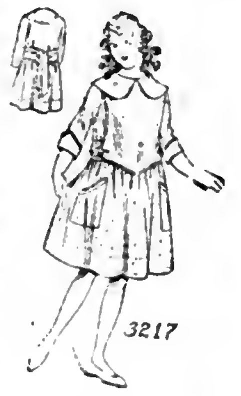
If I didn't have one I should promptly make one from a series of drygoods boxes as we often read of doing. It would probably be less satisfactory, but it would save lots of steps. Anyone, no matter how destitute, could have a fireless cooker like mine; but no one, no matter how rich, could buy one that works better for the purpose for which it is intended. Get a drygoods box about 20 by 30 inches—the size may vary a few inches but it should be adapted to the place where it is to stand and must be large enough to admit whatever cooking utensils one expects to use therein and allow at least four or five inches of space on all sides for packing. I have four enameled pails with tight covers, holding respectively four quarts, three quarts and two two quarts. This year, however, I am going to use only three, rejecting one of the duplicates because I never need so many compartments at once.

Line the box with many thicknesses of old newspapers, overlapping the edges so that no cracks are left, and pack in the bottom a very tight layer of hay about four inches deep. Arrange pails on this and pack hay very snugly around and between them until each has a nest for itself that exactly fits it. For the cover we used a clean bran sack packed with hay and crowded closely into the upper four or five inches of the box so that it forms a cushion that just fills the space. A board cover should be made to lay over this and it should be braced at each end to prevent splitting. Now you are ready to put your potatoes in one pail, meat in another and vegetable in a third, and when they boil "like fun" over a good fire pop them into their nests, cover quickly with their "quilt" and say good-bye to them until you are ready to serve the meal. In hot weather this is an ideal way of cooking cereals, beans, fowls or anything that requires long boiling. People who have used them claim that, by getting two soapstones to put above and below the roasting pan, a hay box will bake or fry just as well as an expensive fireless cooker. I haven't tried it, but I don't know why not, because mine boils as well as the best of the commercial ones. Some people paint the box to match the woodwork in the kitchen or paper it like the kitchen paper, but I never did because mine was used in my back room, which is a part of the woodhouse and has neither paint or paper.

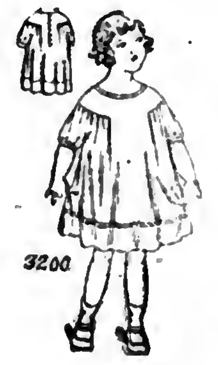
An oil stove is an ideal companion for the hay box and no farm home should be without one. Mine has four burners and a good oven. These things all cost money, but doctor's bills and funerals cost more and are enjoyed less.

PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.



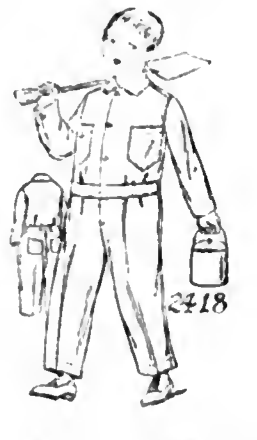
3217



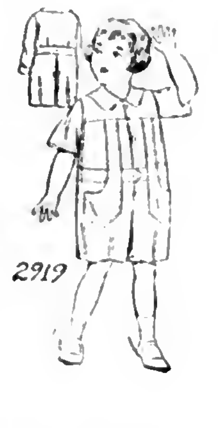
3200

3217.—Play Dress.—The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. A 10-year size will require 4⅜ yards of 36-inch material. Pattern, 10 cents.

3200.—Pretty Frock for Little Tots.—The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. An 8-year size will require 3½ yards of 27-inch material. Unbleached muslin, with embroidery in rows of cross stitch, in red or blue would be simple, serviceable and effective. Pattern, 10 cents.



2418



2919

2418.—Little Man's Overall Suit.—Good for khaki, galatea, drill, corduroy and seersucker. The trousers are cut in one with the front of the waist; at the back, waist and trousers are separate. The garment is comfortable. Pattern is cut in 5 sizes: 4, 6, 8, 10 and 12 years. Size 10 will require 4 yards of 36-inch material. Pattern, 10 cents.

2919.—Another Good Play Suit. The pattern is cut in 4 sizes: 2, 3, 4 and 5 years. Size 4 requires 2⅜ yards of 44-inch material. Pattern, 10 cents.

The sale that pleased thousands

OUR Special Mid-Summer Sale is by far the most popular sale we have ever held. Never has a buying public shown quicker appreciation of real merchandise values. We bought liberally for this sale yet the demand has exceeded even our expectations. Orders have literally poured in in constantly increasing numbers since the first mailing of our Special Mid-Summer Sale Catalogs. Our old customers everywhere have taken the fullest advantage of the many money-saving opportunities offered in this sale by ordering liberally. Thousands of new customers from all sections of the country have responded quickly to the many offerings of bargains in this catalog.

In your neighborhood you will find customers of ours who have ordered from this Sale and received their merchandise. They will gladly tell you of the saving they made by ordering from this Sale.

We want you, too, to take advantage of this opportunity to save money. Get your copy of this Special Catalog now. Turn through it page by page; write down the items you need as you go through; then when you have made up your entire order compare the total with what you would have to pay elsewhere for the same merchandise. We believe that the tremendous saving will astonish you.

If you haven't a copy of this Special Mid-Summer Sale Catalog borrow one from your neighbor and make up your order at once. You will be well repaid for your trouble.

Do not delay another day. Send your order at once.

Remember this Sale closes August 31, 1920!

Here are a few of the big values you will find

Aprons	45c. to $1.19	Gloves	39c. to $2.74
Bathing Suits	50c. to $4.95	House Dresses	$1.89 to $3.49
Blankets	$1.98 to $7.98	Petticoats	98c. to $2.19
Carpet Sweepers	$2.15	Razors	$1.18
Corsets	$1.49 to $4.98	Rugs—Room Size	$10.25 to $50.00
Cream Separators	$15.00 to $55.50	Sewing Machines	$34.35
Curtains	59c. to $2.82	Sheets and Sheetings, 75c. to $1.08 the 10-yd. piece,	$1.87 to $2.55 complete
Diamonds, 1/10 carat	$16.50	Shoes—Kiddies'	79c. to $2.89
Dress Goods	28c. to $3.39	Shoes—Women's and Misses'	$1.19 to $6.98
Dresses	$3.98 to $25.98	Shoes—Men's and Boys'	$1.49 to $8.98
Fireless Cooker	$7.95		
Gasoline Engines	$52.00 to $299.00		

The Charles William Stores
NEW YORK CITY

Markets

PHILADELPHIA PRODUCE

—July 26, 1920

Fresh Fruits.—Cantaloupes.—9 Western, 14 Southern and 2 Honey Dews offered. Western Cantaloupes met an active demand at the lower prices quoted; Southern very irrgular, average best selling at $1.50@2 on standard crates, while some were so poor as to be of very little and uncertain value. Peaches in fair supply and condition is showing quite some improvement, most of today's sales ranging from $1.75@$3 per crate, with one car of Elbertas up to $3.50 per crate. Watermelons in heavy supply and market lower, $325 being top on best large melons with most sales probably between $200@300 per car. Nearby Apples very plentiful and market not cleaning up at the low prices quoted. Dewberries and Huckleberries in moderate supply and steady. Cherries in light supply. Apples.—Delaware and Maryland hampers, 25c@$1.50; N.J., ⅝ bsk. No. 1s, 35@90c; No. 2s and drops, 10@25c. Dewberries, qt., 20@25c; Huckleberries, qt., 15@25c; Raspberries, red, pt., 12@15c; Cherries, N. Y., 4-qt. bsk., 50@60c; Peaches, Ga. Belles, crate, 75c@$3; Elbertas, crate, 50c@$3.50; Hiley Belles, crate, $1.75@3; Hiley Belles, Bshl., $2@2.75; Georgia Belles, bshl., $1.75@2; Elbertas, poor bshl., 70c@$1.10; N. J., bsk., 75c@$1.25.

Vegetables.—Potatoes in fairly plentiful supply and market easier. Quotations cover average sales altho an occasional sale of both Southern barrels and nearby baskets were made a little higher. Offerings: Beans light; Cabbage continues in excessive supply and prices no better; Celery lower; Fancy Corn firm as quoted; Cucumbers plentiful and moving hard at low prices; Egg Plants higher under light offerings. Most sales of N. Y. State Lettuce were made from $1@1.50, with a little at $1.50. Onions continue to sell at low prices; Lima Beans gradually seeking lower levels. Five cars N. Y. State Peas sold from $2.25@2.75, mostly $2.75. Peppers easier under increasing supplies, many of which arrived after market opened. Tomatoes plentiful and lower. Turnips hard to move. Other vegetables steady as quoted.

Beans, N. J., green ⅝ bsk., 30@65c; wax, N. J., ⅝ bsk., 35@75c; Beets, 100 bunches, $1.50@2.50; Cabbage, nearby, ⅝ bsk., 15@25c; nearby, bbl., 50@75c; Carrots, 100 bunches, $2@3; hamper, $1@1.50; Celery, bunch, 20@50c; Cerely, hearts, bunch, 6@8c; Corn, white, ⅝ bsk., 90@$1.25; sugar, ⅝ bsk., $1.40@1.50; Cucumbers, Md.-Del., hamper, 40@50c; N. J., ⅝ bsk., 15@50c; Cucumber Pickles, ⅝ bsk., 50@75c; Egg Plants, N. J., ⅝ bsk., $2@2.50; Lettuce, N. Y., box, 85c@$1.50; N. Y., hamper, 50@75c; Onions, N. J., ⅝ bsk., 40@50c; Lima Beans, hampers, $3@4; J. bsk., $2.50@3; Mushrooms, No. 3 bsk., $2.50@3; Peas, N. Y., Telephones, bus., $2.25@2.75; Peppers, N. J., ⅝ bsk., 75c@$1.10; Rhubarb, 100 bunches, $1.50@3; Scallions, 100 bunches, 50c@$1.50; Squash, white, ⅝ bsk., 10@35c; Italian, ⅝ bsk., 15@50c; **Tomatoes**, Early No. 1s, 25@60c; Second Early No. 1s, 50c@$1; ⅝ bsk., No. 2s, 15@50c; Crates No. 1s, 50c@$1.10; Crates No. 2s, 25@50c. Potatoes, East Shore, bbl., No. 1s, $5@6; East Shore Defective, $2.50@4.25; East Shore Mach. Grade No. 2s, $3@3.50; N. J., 150-lb. sacks, No. 1s, $5.25@5.50; N. J., ⅝ bsk. No. 1s, $1.15@1.30; N. J., 150-lb. sacks No. 2s, $2.50; N. J., ⅝ bsk., scabby, 60c@$1; N. J., ⅝ bsk. No. 2s, 50@90c. Turnips, white, ⅝ bsk., 15@30c; yellow, ⅝ bsk., 25@40c. Parsley, N. J., hamper, 50c@$1.

Live Fowls.—Heavy, 39@41c; Light to medium, 35@37; Leghorn Fowls, 34@35c; Roosters, 25@26c; Broilers, not Leghorns, 40@50c; Leghorn Broilers, 35@40c; Ducks, 28@30c; Spring Ducks, 30@35c.

Eggs.—Nearby Extra Firsts, 51@53c; nearby current receipts, 48c; ordinary to fair, 44@47c; Western Firsts, 47@50c; Western Extra First, 51@53c; Seconds and poroer, 30@45c.

BALTIMORE PRODUCE

—July 26, 1920

Butter.—Creamery, Western separator, extras, 58@59c; do, firsts, 57@58c; Western prints, ½ lb., extras, 60@61c; do, firsts, 57@59c; do, 1 lb., extras, 60@61c; do, firsts, 57@59c; nearby Creamery, extras, 48@50c; do, firsts, 46@47c; dairy prints, Md., Pa. and Va., extras, 43@44c; do, firsts, 42@43c; storepacked, firsts, 42@43c.

Eggs.—Western Md., Pa. and nearby, firsts, 45c; Eastern Shore, Md. and Va., firsts, 45c; Western (Ohio), firsts, 45c; W. Va., firsts, 44c; Southern (N. C.), firsts, 43c.

Live Poultry.—Chickens, spring, under 1¼ lbs., lb. 40c; do, 1¼ to 1½ lbs., lb. 42@45c; do, 1¾ to 2 lbs., lb. 46@48c; do, old roosters, lb., 20c; do, old hens, over 4 lbs., lb. 39@40c; do, small, lb. 37@38c; do, white Leghorn Hens, lb., 37@38c; do, young white Leghorns, 1½ lbs., lb., 40c; do, under 1½ lbs., lb., 35@40c. Ducks, Muscovy and mongrel, old, lb., 27@28c; do, white Pekins, young, lb., 38@40c; do, spring, 4 lbs. and over, lb., 35@40c; do, smaller, poor, lb., 30@35c. Pigeons, old, pair, 45c; do, young, pair, 45c.

NEW YORK PRODUCE

—July 26, 1920

Butter.—Steady; receipts, 8583; creamery, higher than extras, 56½@57c; creamery, extras (92 score), 56c; creamery, firsts (88 to 91 score), 52@55½c; packing sock, current make, No. 1, 44c.

Eggs.—Steady; receipts, 16,394; fresh-gathered extra firsts, 51@53c; fresh-gathered firsts, 47@50c; state, Pa. and nearby western hennery whites, firsts to extras, 61@70c; state, Pa. and nearby western hennery browns, extras, 56@60c; state, Pa. and nearby gathered browns and mixed colors, firsts to extras, 47@55c.

Cheese.—Steady; receipts, 4485; state, whole milk, flats, current make, white and colored, specials, 27@28c; do, average run, 25@26½c; state, whole milk, twins, current make, specials, 27@27¾c; do, average run, 26@62¾c.

Live Poultry.—Firmer; broilers, by freight, 42@45c; broilers, by express, 40@47c; fowls, 35c; old roosters, 24c; turkeys, 35c.

Dressed Poultry.—Steady; western broilers, fresh, 60@62c; western chickens, frozen 40@48c; fowls, fresh, 28@42c; roosters, fresh, 24@25c; turkeys, frozen, 57@60c; turkeys, fresh, 50c.

Vegetables.—Potatoes.—L. I., bbl., $5.50@7; Jy., 165-lb., $6.50@7.25; Jy., 150-lb., $5.50@6.00; No. 2, $1@2.25; Culls, 50c@$1. Beans.—Wax, bsk., 50c@$1.50; Green, 50c@$1.25; Italain, 50c@$1.25. Beets.—Nearby, bbl., $2.50@3.50; bsk., 75c@$1; 100 bunches, $1@2. Carrots.—Nearby, 100 bunches, $2@3; bsk., $1.25@2. Corn.—Jy., 100, $1@3; N. C., crt., $1@2. Celery.—State, bch., 15c@$1; Jy., bch., 15@90c; crates, $2@7. Cucumbers.—Jy., bsk., 75c@$1.50; box, 50c@$1; doz., 50@60c. Pickles.—Jy., bsk., $1.50@2; Del., bsk., 25c@$1; L. I., doz., 50c@$1. Cabbage.—L. I., bbl., 60c@$1; 100, $2@2.50; Jy., bbl., 60c@$1. Cauliflower.—Nearby, bbl., $1@3.50. Egg-plants.—Jy., box $1.25@1.50; bsk., $2@2.75. Garlic.—Lb., 12@20c. Kohlrabi.—100 bunches, $1@2. Kale.—Nearby, bbl., 25@50c. Leeks.—Nearby, 100, $2@4. Lima Beans.—Jy., bsk., $2@3; Md., bsk., $1.50@2.50. Lettuce.—State, crt., 75c@$1.75; bsk., 50c@$1.25; Nearby, bbl., 75c@$2; bsk., 25c@$1. Mushrooms.—Jy., bsk., $3@4; Pa., bsk., $2.50@3.50. Onions.—Jy., white, bsk., 60c@$1; yellow, bsk., 60@90c; Md.-Va., bsk., 50c@75c; Nearby, 100 bchs., $1@2. Peppers.—Jy., Bullnose, bsk., $1.25@1.75; Long, $1.25@1.50; Italian, $1@1.25; Finger, $1@1.25; Jy., box, $1@1.25; Peas.—State, bsk., $1@2.25; bag, $1@1.75; L. I., bag, 50c@$1.25; Jy., bsk., 50c@$1.25. Parsley.—Nearby, 100, $3@4; bsk., 50c@1.5. Radishes.—Nearby, 100 bunches, $1@3. Romaine.—Nearby, bbl., 75c@$1.25; bsk., 25@75c; State, crt., 50c@$1; bsk., 40c@75c. Rhubarb.—100 bchs., $2@4. Scallions.—Nearby, 100 bchs., $1@1.50. Spinach.—Nearby, bbl., 50c@$1; State, bsk., 50c@75c. Squash.—White, bbl., $2@2.50; bsk., 75c@$1; box, 50@75c; yellow, bbl., $2@2.50; bsk., 75c@$1; box, 50@75c; Italian, bsk., 75c@$1.50; Marrow, bbl., $1.50@1.75. Turnips.—White, bbl., $1@2. Rutabaga, bbl., $1.25@2; bag, $1@1.75. Tomatoes—Up. Jy., box, $2.50@4.50; No. 2, box, $1.50@2. S. Jy., Acme, $2@3; Stone, $1.25@2; Grant, 75c@1.25; No. 2, box, 50@75c; Jy., 12-qt. bsk., 50@75c; Jy., carrier, $1.50@3; Md., crt., 50c@$1.50.

YORK PRODUCE MARKETS

—July 24, 1920

Prices at the different market houses have ruled steady with the exception of potatoes, cabbage and beans. These have dropped heavily under increased supply.

Eggs.—48@50c per doz.

Butter.—Country, 60@65c lb.; separator, 65@75c lb; milk, 12c qt.

Poultry.—Hens, 30c; springers, 32c; dressed, $1.25@2.50.

Vegetables.—Potatoes, 30@50c half peck; cabbage, 3@10c head; lettuce, 2@5c head; radishes, 5c bch.; onions, 5c bch.; beets, 5c bch.; asparagus, 10@12c bch.; peas, 20@25c quarter peck; beans, 8@10c half peck; hams, sliced, 45@80c lb.; whole, 40@45c lb.

Fruit.—Apples, 15@20c box; 20@25c quarter peck; common, 15@20c half peck; cherries, 15c box; currants, 18c box; raspberries, 18@30c box; reds, 30@40c box; blackberries, 25@30c box; huckleberries, 40c box; tomatoes, 3@10c each; 20@40c box; corn, 40@50c doz.

Retail Grain Market.—Wheat, $3; corn, $2.25; Oats, $1.40; Rye, $1.75; Middlings, $4.25 cwt.; Bran, $3.75 cwt.

Wholesale Grain Market.—Wheat, $2.75; Corn, $1.70; Rye, $1.50; Oats, $1; Bran, $70 ton; Middlings, $80 ton.

LANCASTER PRODUCE

—July 26, 1920

Housewives today made their first big raid on the berry stalls preparatory to canning, and while prices were high the demand was heavy and all offerings were moved. An easing up in the sugar situation is believed to have boomed the canning plans. Beans, which were offered in glut-like lots, were the cheapest food on the market and brought 5 cents per quarter peck. The quotations:

Butter and Eggs.—Fresh eggs, 50c doz.; Creamery Butter, 73@75c lb.; Country Butter, 70@73c lb.

Poultry.—Dressed Old Chickens, $2@2.25 each; Dressed Young Chickens, $1.90@2 ea.

Vegetables.—Potatoes, 20c ¼ pk.; do, $3@3.50 bu.; Corn, 30@40c doz.; Cabbage, 8@15c head; Lettuce, 15@25c head; Turnips, 30c ½ pk.; Beans, 10c ½ pk.; Peas, 30@35c ½ pk.; Tomatoes, 15@20c box; Spinach, 30@35c ½ pk.

Fruits.—Cantaloupes, 15@20c ea.; Watermelons, 60@65c ea.; Huckleberries, 35c box; Apples, 40@50c ½ pk.; Peaches, 15c box; Plums, 10@15c box; Raspberries, 25@30c box; Seckel Pears, 25@30c ½ pk.

PHILADELPHIA LIVESTOCK

July 26, 1920

Receipts for the week ending July 24, 1920, were as follows:

Totals for week	1,680	4,812	7,885
Previous week	2,289	7,969	8,994

Calves.—Receipts of calves were 2,838 head against 3,174 head previous week.

Beef Cattle.—Trade was slow and the market for steers and cows was weak, though prices were without important change. Veal ruled firm and higher with occasional sales of fine stock at $20, but supplies were largely of the under grades, which sold at unchanged prices. Quotations were as follows: Steers good to choice, $15@16.75; fair to good $13.50@15; common to fair, $11.50@13.50; cows, dairy, good to choice, 8½@10c; do, fair to good, 7@8½c; bulls, 7@10½c; calves, extra to choice, $19@19.50; fair to good, $16@18; do, common, $11@13; Tennessee, $15@17; other southern, $8@10.

Sheep and Lambs.—Receipts were fairly liberal, but demand was fair for choice stock and values generally were steadily maintained. Quotations: Sheared sheep, wethers, extra, $11@11.50; do, good to choice, $8.50@9.50; do, medium, $7@8; do, common, $2@5; ewes, heavy, fat, $7@8; lambs, spring, choice, $16@16.50; medium, $14@15; common, $9@11.

Hogs.—The market ruled steady under moderate supplies and a fair demand for desirable stock. We quote: Best western, $19; good, nearby, $17.

City Dressed Stock.—Steers, heifers and cows were dull and lower. Lamb sold slowly and prices were easier. Other descriptions were generally steady, with demand fair for desirable stock. We quote as follows: Steers, 20@26c; heifers, 16@24c; cows, choice, 18@21c; cows, light, 12@16c; calves, city dressed, choice, 29@31c; calves, country dressed. 25@27c; lambs, spring, choice, 33@35c; sheep, 16@26c; hogs, 25c.

LIVESTOCK MARKETS

—July 28, 1920

LANCASTER

Cattle.—Receipts, 3060, against 1710 last Monday; market fairly active; prices steady; good to choice steers, $15.40@16.35; fair to good, $12.90@14.35; medium to fair, $12.10@13.35; common to medium, $9.90@11.35; small and fat bulls, $11.40@12.85; medium to good, $9.40@11.35; common to medium, $7.40@8; smooth and prime heifers, $11.65@12.85; common to medium, $9.90@11.35; good to choice cows, $8.65@10.35; fair to good, $5.90@8.35; common to medium, $4@8.35; stock bulls, $8@9.85; good to prime calves, $16.90@17.85; medium to good, $15.40@16.25; common to medium, $14.40@14.85.

Hogs.—Receipts, 188; market quiet; prices steady; good to prime, $17@17.50; light to medium, $16.50@17; roughs, $11@12; stags to sows, $8@9.

CHICAGO

Cattle.—Receipts, 15,000; steady to 10c higher for choice steers; common and medium grassers draggy, 15c to 25c lower; top handyweight, $16.75; best heavy, $16.30@16.50; bulk of all weight, $12@16; best she stock, bulls and canners, slow to steady; medium cows dull, 25c to 50c lower; veal calves steady, $16@16.50; stockers slow to 25c lower.

Hogs.—Receipts, 42,000; opened 15c to 25c lower; close 15c to 40c lower, with packing grades declining least; top early, $16.25; late top, $16; light and butcher, $15.10@$16; packing sows, $13.85@14.10; pigs steady, bulk, $14@14.50.

Sheep.—Receipts, 28,000; lambs steady to 25c lower; sheep steady; choice western lambs, $16.15; bulk, $15.25@15.85; top native lambs, $15.25; bulk, $14@14.75; yearlings, $11; wethers, $10; top western ewes, $8.50; top native, $8; feeder lambs, $13.25@14.

EAST BUFFALO

Cattle.—Receipts, 3500; heavy; butcher and shipping steers, 25@50c lower; others steady; shipping steers, $15.25@16; butchers, $9@15; yearlings, $15.50@16.50; heifers, $7@13; cows, $3@11; bulls, $6.50@10.50; stockers and feeders, $7@10; fresh cows and springers, $65@150.

Calves.—Receipts, 2200; steady, $16@19.

Hogs.—Receipts, 9600; 15@40c lower; heavy, $16.25@16.50; mixed, $16.75@17; yorkers, $16.85@17; light yorkers, $16.50@17; pigs, $16; roughs, $13; stags, $8@10.

Sheep and Lambs.—Receipts, 2200; sheep active, lambs slow; lambs, $8@16; yearlings, $7@12.50; wethers, $9.50@10; ewes, $3@9; mixed sheep, $9@9.50.

NEW YORK

Cattle.—Receipts, 4490; firm; steers, $10 $16.25@16.50; pigs, $15.50@16; roughs, 10.

Calves.—Receipts, 4390; firm; veals, $17@21; culls, $14@16; skim-milk calves, $12@14; fed calves, $14.50@15.

Sheep and Lambs.—Receipts, 11,250; steady; sheep, $6@9; yearlings, $9.50@12; culls, sheep, $3@5; common to prime lambs, $12@17; one car very choice do, $17.50; culls, $10@11.

Hogs.—Receipts, 4650; steady; light to medium weights, $17.50; heavy hogs, $16.50@16.75; pigs, $16.50@17; roughs, $13@13.50.

PITTSBURGH

Cattle.—Lower; supply, 100 cars; prime, $15.25@15.75.

Sheep.—Steady; supply, 18 double-decks; prime wethers, $10@10.50; culls and common, $2@4; lambs, $9@15; veal calves, $17@18.

Hogs.—Higher; supply, 40 double-decks; prime heavy, $16.25@16.50; mediums and heavy Yorkers, $17.25@17.30; light Yorkers, $16.25@16.50; pigs, $15.50@16; roughs, $11@13.

PHILADELPHIA HAY AND GRAIN

—July 24, 1920

Baled Hay and Straw.—Receipts, 96 tons of hay and 1 car of straw. Quiet but steady. Quotations were as follows: Timothy hay, No. 1, none here; No. 2, $39@40; No. 3, $33@35; sample, $28@32; no grade, $23@27; clover-mixed hay, light mixed, $36@38; No. 1 mixed, $34@35; straw, No. 1 straight rye, $17@17.50; No. 2 do, $16@17; No. 1 tangled rye, $16@16.50; No. 2, do, $15@15.50; No. 1 wheat straw, $14.50@15; No. 2 do, $13.50@14; No. 1 oat straw, $14.50@15; No. 2, $13.50@14.

Bran.—Dull and unchanged. Car lots, including sacks; soft winter bran, western, in 100-lb. sacks, per ton, $59.50@60; spring bran, in 100-lb. sacks, per ton, $58@59.

Corn.—No. 2 Yellow, $1.78@1.82.

Wheat.—No. 1 red winter, $2.95@2.98; No. 2 do, $2.92@2.95; No. 3 do, $2.89@2.92; No. 4 do, $2.85@2.89; No. 5 do, $2.81@2.84.

Oats.—No. 1 White, $1.27@1.28; No. 2 do, $1.26@1.27; No. 3 do, $1.22@1.23; No. 4 do, $1.20@1.21.

NEW YORK HAY AND GRAIN

—July 24, 1920

Feed.—The market for mill feed was dull and barely steady. Spot goods held firm but without new demand, while Western feeds were offered a little more freely and reflected an easier tone at Western centers.

Quotations: City feed bran, $60; middlings, $62, in 100-lb. sacks; red dog, $79, nominal, in 100-lb. sacks; Western spring bran, $54; standard middlings, $61; flour middlings, $68; red dog, $75, in 100-lb. sacks, 30-day shipment. Oat feed, $42; rye middlings, $58; white hominy feed, $67.50, all in 100-lb. sacks. Cottonseed oil meal, $68; linseed oil meal, $64.50, in 100-lb. sacks.

Hay and Straw.—There is very little improvement in the position of the market. Liberal offerings are reported at practically all harbor points and values in Brooklyn are still sacrificed in order to escape the heavy demurrage charges.

Hay.—Large Bales—Timothy.—No. 1, $41@43; No. 2, $33@40; No. 3, $28@32; Shipping, $24@28; No grade, $18@23. Clover, Mixed.—Fancy, $35@40; No. 1, $28@32; No. 2, $24@28.

Straw.—Large Bales.—No. 1 Wheat, $18@19; No. 1, oat, $13@15.

PHILADELPHIA DAIRY MARKET

—July 24, 1920

Butter.—Receipts, 2728 tubs. There was little wholesale trading and no important change in the general market. Prices ruled in buyers' favor. Quote: Fresh, solid-packed creamery, high-scoring goods, 58½@60½c, the latter for jobbing sales; extra, 57½c do, extra firsts, 55½@56½c; firsts, 52@55c; seconds, 45@51c; sweet creamery, choice to fancy, 59½@61½c; fair to good, 51@58½c; ladle-packed, as to quality, 44@47c; packing stock, 39@44c; fancy brands of nearby prints were jobbing at 67@69c; good to choice, 59@66c; fair, 56@58c.

Cheese ruled steady. New York, whole milk current make, fancy flats, 27½@28c; common to fair, 24@27c; Longhorns, 27½@28c; single Daisies, 27½@28½c; jobbing sales of fancy goods, 29@30c.

NEW YORK MILK MARKET

—July 28, 1920

The demand has been very active the past week and where cans for shipment could be obtained the surplus has been sent to this market and manufacturing stopped. Manufacturers of sweetened condensed milk are in the market and help the trade considerably. The August rate for 3 percent milk in 200-mile zone is $3.35 per 100 lbs., an increase of 40c per 100 lbs. over the July rate; 3.6 percent milk is $3.59, and percent milk $3.75.

Receipts of milk and cream in 40-qt. cans for the week ending July 24, 1920, were as follows:

Railroad	Milk	Cream
Erie	44,346	5,684
Susquehanna	6,981	103
West Shore	12,143	2,415
Lackawanna	52,122	3,026
N. Y. Central (long haul)	204,957	6,196
Ontario	43,575	2,118
Lehigh Valley	62,876	2,333
New Haven	6,300	70
Pennsylvania	12,225	510
Other Sources	5,000	200
Totals	450,525	22,655
Same week last year	420,744	20,705

TOBACCO MARKET

July 24, 1920

No sales were reported during the week and valuations so far as known were unchanged. There were reports of attractive offers upon the growing crop, the same ranging up to $26 per cwt. With practically all of the formulating conditions so far in the future, none save the most uncertain and speculative estimate of future valuations could be made at present.

It is presumed that in general growers will profit by past bitter experience in early selling and thus await a time of intelligent action. No reliable estimates of the present acreage have been made as yet but it is conceded that the same is less than last year.

The condition of crop is excellent and such as to cause many to regret that they did not put out more. Some areas are well advanced in growth and will soon be ready for topping. Indeed some fields of the relatively little grown, but always early Havana variety, have been topped and thus will be ready for harvest in some four weeks. At a meeting of the growers' association the erroneous and now discarded custom of allowing suckers to remain on plants, thus to improve the quality of leaf, was advocated. The same was very rightfully condemned. It should be remembered that at all times it is far better to remove all suckers as soon as their presence will permit and also to cultivate as long as overlapping plants make passage through rows possible. If the latter is neglected serious deficiency in weight is almost sure to result and the quality will be no better.

INTERSTATE MILK PRICES

—July 24, 1920

The price of milk to producers on and after August 1st will be one cent higher, making a price of 10 cents a quart F. O. B. Philadelphia for 4 percent milk. A difference of 4 cents per 100 lbs. is made for each one-tenth of 1 percent butter-fat above or below 4 percent.

PITTSBURGH HAY AND STRAW

—July 26, 1920

The following prices can be realized: No. 1 Timothy, $40; Standard Timothy, $38@39; No. 2 Timothy, $39@40; No. 3 Timothy, $33@35; Light Mixed, $36@38; No. 1 Oat Straw, $14.50@15; No. 2 Oat Straw, $13.50@14; No. 1 Wheat Straw, $14.50@15; No. 2 Wheat Straw, $13.50@14; No. 1 Rye Straw, $17@17.50; No. 2 Rye Straw, $16@16.50.

Except for some damage to peach trees in the North Tier counties of the State, the orchards of Pennsylvania have come through the early spring in excellent shape. This announcement has been made by the Pennsylvania Department of Agriculture, Bureau of Plant Industry.

"In the lowlands in the extreme north of the State," said Prof. J. G. Sanders, head of the Bureau of Plant Industry, "The frosts did some damage to the peach trees, but not all the trees in this section were damaged. Reports from every other section of the State show orchards to be in excellent condition. The trees have suffered no injury and with a continuance of favorable weather a bumper fruit crop may be expected."

PENNA. CROPS, JULY, 1920

CORN.—The area planted this season is estimated at 95 percent of last year's acreage, or 1,459,000 acres. The condition of the crop on July 1st was 84 percent of a normal, indicating a yield of 39.5 bushels per acre and a total production of 57,601,000 bushels as compared with 72,192,000 bushels last year, and 61,115,000 bushels, the average production of the past ten years.

WHEAT.—The condition of the crop on July 1st was 83 percent of a normal, indicating a yield of 17 bushels per acre and a total production of 26,220,000 bushels, as compared with 28,665,000 bushels last year, and 23,722,000 bushels, the average production for the past ten years. The stock of old wheat remaining in farmers' hands is estimated at 5.5 percent of last year's crop, or 1,577,000 bushels, as compared with 1,147,000 bushels last year and 1,423,000 bushels, the average stock for the past ten years on July 1st.

POTATOES.—The area planted this season is estimated at 95 percent of last year's acreage, or 241,000 acres. The condition of the crop on July 1st was 92 percent of a normal, indicating a yield of 90.2 bushels per acre and a total production of 21,738,000 bushels as compared with 25,400,000 bushels last year, and 23,580,000 bushels, the average production for the past ten years.

TOBACCO.—The area planted this season is estimated at 93 percent of last year's acreage, or 37,000 acres. The condition of the crop on July 1st was 90 percent of a normal, indicating a yield of 1359 pounds per acre and a total production of 55,719,000 pounds as compared with 54,500,000 pounds last year, and 55,704,000 pounds, the average production of the past ten years.

HAY (Tame).—The condition of all tame hay on July 1st was 82 percent of normal, indicating a yield of 1.35 tons per acre and a total production of 4,020,000 tons as compared with 4,319,000 tons last year, and 4,248,000 tons, the average production for the past ten years. Timothy.—The area for cutting this season is estimated the same as last year's acreage, or 1,122,000 acres. The condition of the crop was 83 percent of a normal as compared with 90 percent last year and 82 percent, the average condition for the past ten years on July 1st. Clover.—The condition of the crop on July 1st was 82 percent of a normal as compared with 88 percent last year and 80 per cent, the average condition for the past ten years on July 1st. Alfalfa.—The condition of the crop on July 1st was 90 percent of a normal, as compared with 91 percent last year and 90 percent, the average condition for the past ten years on July 1st.

FRUIT. — Apples.—The condition of the total or agricultural crop on July 1st was 80 percent of a normal, indicating a production of 17,737,000 bushels as compared with 7,972,000 bushels last year. The commercial crop is estimated at 1,478,400 barrels, as compared with 759,000 barrels last year, and 1,116,000 barrels in 1918. Peaches.—The condition of the total crop on July 1st was 70 percent of a normal, indicating a production of 1,526,000 bushels as compared with 1,550,000 bushels June 1st estimate, and 1,200,000 bushels, last year's final estimate. Pears.—The condition of the total crop on July 1st was 75 percent of a normal indicating a production of 532,000 bushels, as compared with 618,000 bushels, June 1st estimate, and 355,000 bushels, last year's final estimate. Grapes.—The condition of the crop on July 1st was 87 percent of a normal as compared with 81 percent last year and 75 percent, the average condition for the past ten years on July 1st.

MARYLAND CROP FIGURES

Maryland's farm products in 1919 amounted to $205,816,000. A comparison of this total with figures from the census report for 1910, shows that in the ten-year period the yearly value of the farm products in the State has increased almost two and a half times.

Both in total yield and in value corn stands out as Maryland's principal crop. Its 1919 value is estimated at $39,778,000. Wheat, the second crop in value, covered a larger acreage than corn in 1919 but the returns were considerably less, as indicated by the $22,995,000, which represents its value. Hay and forage crops with a value of $15,750,000 are rated third.

The livestock and animal products in the State are considerably below the farm crops in value but were estimated at $90,964,000 in 1919. Dairy products, amounting to $26,039,000, were responsible for the largest value under this class. The fruit crops of the State amounted to $6,981,000, with apples holding the leading place with a value of $2,759,000. Strawberries were second with a total value of $2,400,000.

The figures for the counties put Frederick in the lead with a total output valued at $22,303,500. Baltimore County, with products valued at $17,971,500, is second but is only slightly ahead of Carroll, whose products totaled $17,022,500. Talbot and Harford are the only two counties in which the value of animals and animal products exceed the value of other farm crops. Washington County heads the list of fruit producers, with Anne Arundel second.

Higher prices paid for farm products in 1919 were partly responsible for the big increase in values since 1910. But the report shows that the acreage of all the leading crops has been materially increased in the past ten years and that the yield has also shown a decided upward tendency. In the case of corn a comparison with the figures of the 1910 census indicates that the State is now producing one and a half times as much as in 1910. Potatoes, wheat, oats and rye show similar increases, though not in such large proportion.

Loading the Truck For an Early Trip to Market

MEAT PRODUCTION IN U. S. DECREASING

Meat production in the United States during the half-year just closed, as compared with the first half of 1919, shows a decrease of about 5 percent, which amounts to several hundred million pounds, according to official figures of slaughter at the sixty-nine principal stockyards.

At these sixty-nine markets combined, slaughter of cattle, hogs and sheep for the first six months of the year shows a falling off of more than two and a half million animals as compared with the first six months of 1919. This indicates a probable decrease of more than 400,000,000 pounds in meat production for the first six months of 1920.

U. S. IMPORTING LAMB AND MUTTON

The British Government has recently adopted the policy of shipping lamb and mutton to the United States. One or two cargoes have arrived and it is understood that more will be received during the summer.

England, as everybody knows, consumes more mutton and lamb than she produces. For many years New Zealand and Australia, as well as some of the South American countries, have contributed very largely of their mutton and lamb to supply England, but there is, at the present time, more Australian and New Zealand lamb and mutton available for shipment from those countries than England can consume.

The movement of live sheep and lambs to market in this country has been moderate. Conditions on the range have been unfavorable and the western lamb crop will be below normal and the cost of production high. For these reasons sheep and lamb producers naturally view large shipments of New Zealand lambs to the United States with considerable apprehension.

JUNE FEDERAL FARM LOANS

During the month of June, 1920, an aggregate of $6,429,100 was loaned to 1880 farmers of the United States by the Federal Land Banks on long-time first mortgages. During June 156 applications were received asking for $751,600, and during the same month 106 loans were approved by them amounting to $464,500.

On June 30, 1920, there were operating in the United States 3983 Farm Loan Associations, and the total mortgage loans made by the Federal Land Banks thru these associations to 127,238 farmer-borrowers as of that date amounted to $354,302,441. The amount outstanding in the Baltimore district is $13,612,679, and in the Springfield district 13,231,043.

GAS ENGINES AS LABOR-SAVING DEVICES

Gas engines have become a general farm necessity. Information just compiled by the Bureau of Statistics, Pennsylvania Department of Agriculture, show that approximately 27 percent of the farmers of Pennsylvania are using these engines. This is one of the many labor-saving devices that farmers have adopted to expedite farm work during these times when the labor problem on the farms is seriously acute.

It appears that Berks, Chester, Montgomery and Northampton counties rank first in the number of gas engines. It is estimated that 60 percent of the farmers in each of these counties own and operate these machines. Lancaster 55 percent, Bucks 54 percent and Lehigh 52 percent.

APPLE CROP ESTIMATES

	1920 Thousands of Barrels	1919 Thousands of Barrels
New York	6,494	2,975
New Jersey	583	587
Pennsylvania	1,478	759
Delaware	210	192
Maryland	397	226
Virginia	2,203	1,508
West Virginia	1,036	648
Ohio	922	364
Indiana	704	197
Illinois	1,703	750
Michigan	1,624	1,109
Missouri	1,165	1,127
Arkansas	441	1,010
Colorado	735	828
Idaho	772	1,200
Washington	4,108	6,440
Oregon	689	1,357

PEACH CROP ESTIMATES

	1920 Thousands of Barrels	1919 Thousands of Barrels
New York	1,636	1,648
New Jersey	937	1,018
Pennsylvania	1,526	1,200
Delaware	244	277
Maryland	818	731
Virginia	1,372	928
West Virginia	1,210	760
North Carolina	1,695	713
Georgia	4,304	5,895
Ohio	2,109	428
Illinois	1,208	790
Michigan	1,190	480
Kentucky	1,468	726
Tennessee	1,248	978
Texas	750	2,760
Oklahoma	156	1,007
Arkansas	86	3,639
Colorado	616	840
Washington	771	1,899
California	15,889	17,600

The Cape May County Farmers' Co-operative Association delivered, by truck, 116,000 Ruby King pepper plants on June 1st. A second installment of 45,000 plants was delivered about two weeks later.

The result of the referendum sent out in New York by the State Federation of Farm Bureaus on the Nolan Bill resulted in an almost unanimous sentiment against it. 233,000 farmers were opposed and 22,000 for it. The majority of farmers are carrying a heavy tax burden now without an extra tax of 1 percent on land holdings in excess of $10,000.

Whispering Smith

by Frank H. Spearman

CHAPTER XX

At the Dike

(Continued from Last Week.)

Dicksie came into the light as he hastened over. If she was uncertain in manner, he was not. He met her, laughing just enough to relieve the tension of which both for an instant were conscious. She gave him her hand when he put his out, though he felt that it trembled a little. "Such a ride as you have had! Why did you not send me word? I would have come to you!" he exclaimed, throwing reproach into the words.

Dicksie raised her eyes. "I wanted to ask you whether you would sell us some grain sacks, Mr. McCloud, to use at the river, if you could spare them?"

"Sacks? Why, of course, all you want! But how did you ever get here? In all this water, and two lone women! You have been in danger tonight. Indeed you have—don't tell me! And you are both wet; I know it. Your feet must be wet. Come to the fire. O Bill!" he called to Dancing, "what's the matter with your wood? Let us have a fire, won't you?—one worth while; and build another in front of my tent. I can't believe you have ridden here all the way from the ranch, two of you alone!" exclaimed McCloud, hastening boxes up to the fire for seats.

Marion laughed. "Dicksie can go anywhere! I couldn't have ridden from the house to the barns alone."

"Then tell me how you could do it?" demanded McCloud, devouring Dicksie with his eyes.

Dicksie looked at the fire. "I know all the roads pretty well. We did get lost once," she confessed in a low voice, "but we got out again."

"The roads are all under water, though."

"What time is it, please?"

McCloud looked at his watch. "Two minutes past twelve."

Dicksie started. "Past twelve? Oh, this is dreadful! We must start right back, Marion. I had no idea we had been five hours coming five miles."

McCloud looked at her, as if still unable to comprehend what she had accomplished in crossing the flooded bottoms. Her eyes fell back to the fire. "What a blaze!" she murmured as the driftwood snapped and roared. "It's fine for tonight, isn't it?"

"I know you both must have been in the water," he insisted, leaning forward in front of Dicksie to feel Marion's skirt.

"I'm not wet!" declared Marion, drawing back.

"Nonsense, you are as wet as a rat! Tell me," he asked, looking at Dicksie, "about your trouble up at the bend. I knew something about it. Are the men there tonight? Given up, have they? Too bad! Do open your jackets and try to dry yourselves, both of you, and I'll take a look at the river."

"Suppose I only say suppose—you first take a look at me." The voice came from behind the group at the fire, and the three turned together.

"By Heaven, Gordon Smith!" exclaimed McCloud. "Where did you come from?"

Whispering Smith stood in the gloom in patience. "Where do I look as if I had come from? Why don't you ask me whether I'm wet? And won't you introduce me—but this is Miss Dicksie Dunning, I am sure."

Marion with laughter hastened the introduction.

"And you are wet, of course," said McCloud, feeling Smith's shoulder.

"No, only soaked. I have fallen into the river two or three times, and the last time a big rhinoceros of yours down the grade, a section foreman named Klein, was obliging enough to pull me out. Oh, no! I was not looking for you," he ran on, answering McCloud's question; "not when he pulled me out. I was just looking for a farm or a ladder or something. Klein, for a man named Small, is the biggest Dutchman I ever saw. 'Tell me, Klein,' I asked, after he had quit dragging me out—he's a Hanoverian—'where did you get your pull? And how about your height? Did your grandfather serve as a grenadier under old Frederick William and was he kidnapped?' Bill, don't feed my horse for a while. And Klein tried to light a cigar I had just taken from my pocket and given him—fancy! the Germans are a remarkable people—and sat down to tell me his history, when some friend down the line began bawling through a megaphone, and all that poor Klein had time to say was that he had had no supper, nor dinner, nor yet breakfast, and would be obliged for some by the boat he forwarded me in." And, in closing Whispering Smith looked cheerfully around at Marion, at McCloud, and last and longest of all at Dicksie Dunning.

"Did you come from across the river?" asked Dicksie, adjusting her wet skirt meekly over her knees.

"You are soaking wet,'" observed Whispering Smith. "Across the river?" he echoed. "Well, hardly, my dear Miss Dunning! Every bridge is out down the valley except the railroad bridge and there are a few things I don't tackle; one is the Crawling Stone on a tear. No, this was across a little break in this man McCloud's track. I came, to be frank, from the Dunning Ranch to look up two women who rode away from there at seven o'clock tonight, and I want to say that they gave me the ride of my life," and Whispering Smith looked all around the circle and back again and smiled.

Dicksie spoke in amazement. "How did you know we rode away? You were not at the ranch when we left."

"Oh, don't ask him!" cried Marion.

"He knows everything," explained McCloud.

Whispering Smith turned to Dicksie. "I was interested in knowing that they got safely to their destination—whatever it might be, which was none of my business. I happened to see a man that had seen them start, that was all. You don't understand? Well, if you want it in plain English, I made it my business to see a man who made it his business to see them. It's all very simple, but these people like to make a mystery of it. Good women are scarcer than riches, and more to be prized than fine gold—in my judgment—so I rode after them."

Marion put her hand for a moment on his coat sleeve; he looked at Dicksie with another laugh and spoke to her because he dared not look toward Marion. "Going back tonight, do you say? You never are."

Dicksie answered quite in earnest: "Oh, but we are. We must!"

"Why did you come, then?" It's taken half the night to get here, and will take a night and a half at least to get back."

"We came to ask Mr McCloud for some grainsacks—you know, they have nothing to work with at the ranch," said Marion; "and he said we might have some and we are to send for them in the morning."

"I see. But we may as well talk plainly." Smith looked at Dicksie. "You are as brave and as game as a girl can be, I know, or you couldnt' have done this. Sacks full of sand, with the boys at the ranch to handle them, would do no more good tomorrow at the bend than bladders. The river is flowing into Squaw Lake above there now. A hundred men that know the game might check things there by daylight. Nobody else, and nothing else on God's earth, can."

There was silence before the fire. McCloud broke it: "I can put the hundred men there at daylight, Gordon, if Miss Dunning and her cousin want them," said McCloud.

Marion sprang to her feet. "Oh, will you do that, Mr. McCloud?"

McCloud looked at Dicksie. "If they are wanted."

Dicksie tried to look at the fire. "We have hardly deserved help from Mr. McCloud at the ranch," she said at last.

He put out his hand. "I must object. The first wreck I ever had on this division Miss Dunning rode twenty miles to offer help. Isn't that true? Why, I would walk a hundred miles to return the offer to her. Perhaps your cousin would object," he suggested, turning to Dicksie; "but no, I think we can manage that. Now what are we going to do? You two can't go back tonight, that is certain."

"We must."

"Then you will have to go in boats," said Whispering Smith.

"But the hill road?"

"There is five feet of water across it in half a dozen places. I swam my horse through, so I ought to know."

"It is all back-water, of course, Miss Dunning," explained McCloud. "Not dangerous."

"But moist," suggested Whispering Smith, "especially in the dark."

McCloud looked at Marion. "Then let's be sensible," he said. "You and Miss Dunning can have my tent as soon as we have supper."

"Supper!"

"Supper is served to all on duty at twelve o'clock, and we're on duty, aren't we? They're about ready to serve now; we eat in the tent," he added, holding out his hand as he heard the patter of raindrops. "Rain again! No matter, we shall be dry under canvas."

Dicksie had never seen an engineers' field headquarters. Lanterns lighted the interior and the folding-table in the middle was strewn with papers which McCloud swept off into a camp-chest. Two double cots with an aisle between them stood at the head of the tent, and, spread with bright Hudson Bay blankets, looked fresh and undisturbed. A box-table near the head-pole held an alarm-clock, a telegraph key, and a telephone, and the wires ran up the pole behind it. Leather jackets and sweaters lay on boxes under the tent-walls, and heavy boots stood in disorderly array along the foot of the cots. These McCloud, with apologies, kicked into the corners.

"Is this where you stay?" asked Dicksie.

"Four of us sleep in the cots, when we can, and an indefinite number lie on the ground when it rains."

Marion looked around her. "What do you do when it thunders?"

The two men were pulling boxes out for seats; McCloud did not stop to look up. "I crawl under the bed—the others don't seem to mind it."

"Which is your bed?"

"Whichever I can crawl under quickest. I usually sleep there." He pointed to the one on the right.

"I thought so. It has the blanket folded back so neatly, just as if there were sheets under it. I'll bet there aren't any."

"Do you think this is a summer resort? Knisely, my assistant, sleeps there, but of course we are never both in bed at the same time; he's down the river tonight. It's sort of continuous performance, you know." McCloud looked at Dicksie. "Take off your coat, won't you, please?"

Whispering Smith was trying to drag a chest from the foot of the cot, and Marion stood watching. "What are you trying to do?"

"Get this over to the table for a seat."

"Silly man! why don't you move the table?"

Dicksie was taking off her coat. "How inviting it all is!" she smiled. "And this is where you stay?"

"When it rains," answered McCloud. "Let me have your hat, too."

"My hair is a sight, I know. We rode over rocks and up gullies into the brush——"

"And through lakes—oh, I know! I can't canceive how you ever got here at all. Your hair is all right. This is camp anyway. But if you want a glass you can have one. Knisely is a great swell; he's just from school and has no end of things. I'll rob his bag."

"Don't disturb Mr. Knisely's bag for the world!"

"But you are not taking off your hat. You seem to have something on your mind."

"Help me to get it off my mind, will you, please?"

"If you will let me."

"Tell me how to thank you for your generosity. I came all the way over here tonight to ask you for just the help you have offered, and I could not—it stuck in my throat. But that wasn't what was on my mind. Tell me what you thought when I acted so dreadfully at Marion's."

"I didn't deserve anything better after placing myself in such a fool position. Why don't you ask me what I thought the day you acted so beautifully at Crawling Stone Ranch? I thought that the finest thing I ever saw."

"You were not to blame at Marion's."

"I seemed to be, which is just as bad. I am going to start the 'phones

going. It's up to me to make good, you know, in about four hours with a lot of men and material. Aren't you going to take off your hat?—and your gloves are soaking wet."

McCloud took down the receiver, and Dicksie put her hands slowly to her head to unpin her hat. It was a broad hat of scarlet felt rolled high above her forehead, and an eagle's quill caught in the black rosette swept across the front. As she stood in her clinging riding-skirt and her severely plain scarlet waist with only a black ascot falling over it, Whispering Smith looked at her. His eyes did not rest on the picture too long, but his glance was searching. He spoke in an aside to Marion. Marion laughed as she turned her head from where Dicksie was talking again with McCloud. "The best of it is," murmured Marion, "she hasn't a suspicion of how lovely she really is."

CHAPTER XXI

Supper in Camp

"Will you never be done with your telephoning?" asked Marion. McCloud was still planning the assembling of the men and teams for the morning. Breakfast and transportation were to be arranged for, and the men and teams and material were to be selected from where they could best be spared. Dicksie, with the fingers of one hand moving softly over the telegraph key, sat on a box listening to McCloud's conferences and orders.

"Cherry says everything is served. Isn't it, Cherry?" Marion called to the Japanese boy.

Cherry laughed with a guttural joy.

"We are ready for it," announced McCloud, rising. "How are we to sit?"

"You are to sit at the head of your own table," said Marion. "I serve the coffee, so I sit at the foot; and Mr. Smith may pass the beans over there, and Dicksie, you are to pour the condensed milk into the cups."

"Or into the river, just as you like," suggested Whispering Smith.

McCloud looked at Marion Sinclair. "Really," he exclaimed, "wherever you are it's fair weather! When I see you, no matter how tangled up things are, I feel right away they are coming out. And this man is another."

"Another what?" demanded Whispering Smith.

"Another care-killer." McCloud, speaking to Dicksie, nodded toward his companion. "Troubles slip from your shoulders when he swaggers in, though he's not of the slightest use in the world. I have only one thing against him. It is a physical peculiarity, but an indefensible one. You may not have noticed it, but he is bowlegged."

"From riding your scrub railroad horses. I feel like a sailor ashore when I get off one. Are you going to eat all the bacon, Mr. McCloud, or do we draw a portion of it? I didn't start out with supper tonight."

"Take it all. I suppose it would be useless to ask where you have been today?"

"Not in the least, but it would be useless to tell. I am violating no confidence, though, in saying I'm hungry. I certainly shouldn't eat this stuff if I weren't, should you, Miss Dunning? And I don't believe you are eating, by the way. Where is your appetite? Your ride ought to have sharpened it. I'm afraid you are downcast. Oh, don't deny it; it is very plain; but your worry is unnecessary."

"If the rain would only stop," said Marien, "everybody would cheer up. They haven't seen the sun at the ranch for ten days."

"This rain doesn't count so far as the high water is concerned," said McCloud. "It is the weather two hundred and fifty miles above here that is of more consequence to us, and there it is clear tonight. As long as the tent doesn't leak I rather like it. Sing your song about fair weather, Gordon."

"But can the men work in such a downpour?" ventured Dicksie.

The two men looked serious and Marion laughed.

"In the morning you will see a hundred of them marching forward with umbrellas, Mr. McCloud leading. The Japs carry fans, of course."

"I wish I could forget we are in trouble at home," said Dicksie, taking the badinage gracefully. "Worrying people are such a nuisance. Don't protest, for every one knows they are."

"But we are all in trouble," insisted Whispering Smith. "Trouble! Why, bless you, it really is a blessing; pretty successfully disguised, I admit, sometimes, but still a blessing! I'm in trouble all the time, right now, up to my neck in trouble, and the water rising this minute. Look at this man," he nodded toward McCloud. "He is in trouble, and the five hundred under him, they are in all kinds of trouble. I shouldn't know how to sleep without trouble," continued Whispering Smith, warming to the contention. "Without trouble I lose my appetite.' McCloud, don't be tight; pass the bread."

"Never heard him do so well," declared McCloud, looking at Marion.

"Seriously, now," Whispering Smith went on, "don't you know people who, if they were thoroughly prosperous, would be intolerable—simply intolerable? I know several such. All thoroughly prosperous people are a nuisance. That is a general proposition, and I stand by it. Go over your list of acquaintances and you will admit it is true. Here's to trouble! May it always chasten and never overwhelm us; our greatest bugbear and our best friend! It sifts our friends and unmasks our enemies. Like a lovely woman, it woos us——"

"Oh, never!" exclaimed Marion. "A lovely woman doesn't woo, she is wooed!"

"What are you looking for, perfection in rhetorical figure? This is extemporaneous."

"But it won't do!"

"And asks to be conquered," suggested Whispering Smith.

"Asks! Oh, scandalous, Mr. Smith!"

"It is easy to see why he never could get anyone to marry him," declared McCloud over the bacon.

"Hold on, then! Like lovely woman, it does not seek us, we seek it," persisted the orator. "That at least is so, isn't it?"

"It is better," assented Marion.

"And it waits to be conquered. How is that?"

Marion turned to Dicksie. "You are not helping a bit. What do you think?"

"I don't think woman and trouble ought to be associated even in figure; and I think 'waits' is horrid," and Dicksie looked gravely at Whispering Smith.

McCloud, too, looked at him. "You're in trouble now yourself."

(Continued Next Week.)

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HOT-WEATHER RULES

1. Load lightly, and drive slowly.
2. Stop in the shade if possible.
3. A sponge on top of the head, or even a cloth, is good if kept wet. If dry it is worse than nothing.
4. Water your horse as often as possible. So long as a horse is working, water IN SMALL QUANTITIES will not hurt him. But let him drink only a few swallows if he is going to stand still.
5. When he comes in after work, sponge off the harness marks and sweat, his eyes, his nose and mouth, and the dock. Wash his feet but NOT his legs.
6. If the thermometer is 75 degrees or higher, wipe him all over with a DAMP sponge, using vinegar water if possible. Do NOT wash the horse at night.
7. Saturday night, give a bran mash, lukewarm; and add a tablespoonful of saltpetre.
8. Watch your horse. If he stops sweating suddenly, or if he breathes short and quick, or if his ears droop, or if he stands with his legs braced sideways, he is in danger of a heat or sunstroke and needs attention at once.
9. If the horse is overcome by heat, get him into the shade, remove harness and bridle, wash out his mouth, sponge him all over, shower his legs, and give him two ounces of aromatic spirits of ammonia, or two ounces of sweet spirits of nitre, in a pint of water; or give him a pint of coffee warm. Cool his head at once, using cold water, or, if necessary, chopped ice, wrapped in a cloth.
10. If the horse is off his feed, try him with two quarts of oats mixed with bran, and a little water; and add a little salt or sugar. Or give him oatmeal gruel or barley to drink.
11. Clean your horse AT NIGHT, so that he can rest well, and clean him THOROLY. The salt dandruff drying on his skin makes him uncomfortable, and often produces sores under the harness.
12. Do not fail to water him at night AFTER he has eaten his hay. If you don't he will be thirsty all night.
13. If it is so hot that the horse sweats in the stable at night, TIE HIM OUTSIDE, with bedding under him. Unless he cools off during the night he cannot well stand the next day's heat.

PIGS FEED THEMSELVES WISELY

Expenses may be made less by the use of the self-feeding plan in preference to the hand-feeding system in the hog lot. An experiment was conducted at the Kansas State Agricultural College to show the value of the self-feeder in fattening 75-pound pigs, and at the same time to show the amount of tankage required to balance a corn ration.

Twenty pigs of the same age, quality, condition and weight, were put into two dry lots in groups of ten. The pigs in lot one ate from a self-feeder that was divided into two compartments, one having shelled corn and the other tankage. The pigs in lot two were given all they could eat twice a day of a mixture of ten parts shelled corn and one part tankage. They were watered twice a day in both lots and the experiment was carried on for one hundred days. Three days at the beginning and end of the test the pigs were weighed and all weights and expenses were carefully recorded.

Self-fed Pigs Best

The pigs in lot one ate more corn and less tankage than the hand-fed pigs in lot two. That a 5 percent tankage could balance a corn ration in fattening 75-pound pigs was shown from this experiment, because the self-fed pigs consumed one part tankage and twenty parts corn.

A 100-pound gain in hand-fed pigs was produced by 6.8 bushels of corn and 38 pounds of tankage, and the same gain was produced in the self-fed lot by 5.8 bushels of corn and 17.66 pounds of tankage, that is to say that the corn with tankage produced 14.7 pounds of pork in the hand-fed lot and 17 pounds of pork in the self-fed lot.

Exercise Important Item

The self-fed pig gets more exercise than the hand-fed pig in the many trips he makes to the feeder and in this way probably will get more good from his food. The hand-fed pig is fed twice a day and he eats all he can hold at that time. Perhaps this is the reason why the self-fed pig took less food to produce his 100-pound gain.

At the end of this test the pigs in lot one made a profit of $7.35 a head more than the hand-fed and they required less feed, and less labor to make the 100-pound gain.

RAISING CALVES ON MILK SUBSTITUTES

The need for home-raised calves has led to a search for a "milk substitute." While the feeds which have been tried have given some degree of success, there has not yet been found a complete or entirely satisfactory substitute for milk. It is doubtful if any article or combination of articles that will completely take the place of milk in the diet during the first two months of the calf's life can be found.

There are a number of so-called milk substitutes on the market. Most of them are sold in the form of calf meal, and with proper care many of them will give good results. It should be clearly understood at the outset that calves raised on calf meals will not be as fat and sleek as those raised on milk. They will be growthy and healthful, however, provided they are given proper attention. Calf meals can be bought from local dealers at varying prices, or they may be mixed at home if the proper ingredients can be secured. In many cases the home-mixed calf meals are superior to the ones bought on the market, and as a rule they are considerably cheaper.

A calf meal, in order to give success, should be made up of ingredients that are easily and readily digested and that are not too expensive. A few of the most commonly used materials are fine corn meal, flour middlings, wheat flour (poor grade), ground rice, oat flakes, barley malt, cocoanut meal, linseed meal, flaxseed meal, cottonseed meal, blood flour, blood meal, and dried skim milk or skim milk powder.

Skim milk powder is not absolutely essential and it is rather expensive, but many of the calf meals that have given the best results have contained considerable amounts of it.

HOGS NEED SHADE AND FRESH WATER

Shade and clean water during the summer months are essential to successful pork production. All kinds of hogs must have shade. Too much direct sunlight and heat is a frequent cause of hogs failing to thrive and is often the cause of hogs dying. During July and August small pigs often blister on the backs and about the ears, which causes, in some cases, severe infections and bad sores.

Expensive shelter is not necessary. Shade trees provide ample protection. Where no trees exist temporary shade may be provided by the covering of a frame with canvas, under which the hogs may go for protection. Some producers build individual hog houses with sides that may be lifted to provide an increased amount of shade during the summer months. This plan furnishes shade for hogs where only a few are kept.

Clean, fresh water for drinking and wallow is equally as important as, or more important than, shade. The old-time wallow hole, covered with scum, which was once also the drinking fountain, is no longer in favor with the successful hog-feeder. Hogs must have water to drink, and if they cannot have fresh, clean water in the trough or fountain they will drink where they can find it, regardless of its condition. This fact has caused some to believe that hogs prefer nothing better, but they do and demonstrate the fact when they are able to get fresh water from the well.

The clean wallow hole is also important. Hogs may use the muddy wallow if no other is available; but again, if clean water is provided in a concrete wallow they will prefer it to the mud hole. Concrete wallows are not expensive if constructed at odd times when regular farm labor can be utilized. An excavation 6 by 8 feet, or larger, and about 14 inches deep, walled and floored with concrete and filled with water will prove a profitable attraction to the hogs on hot summer days.

ACCREDITED HARD WORK

County Agent P. S. Crossman, McKean County, Pa., after doing a little missionary work in one community of his county, called together the dairymen of that particular community on the night of July 6th for the purpose of discussing the value of tuberculosis-free cattle in milk production.

After discussing this subject and answering questions for nearly two hours, thirty-seven men stepped forward and signed agreement blanks applying for the federal and state test, through which plan the herds are to be accredited.

The farmers of this community are to be paid a premium of 10 cents for every hundred pounds of milk that comes from tuberculosis free cattle. These farmers are not large producers, but the 10 cents per hundred will mean on an average to all the dairymen of this community an increase of the yearly income of at least $180.

Since that time the work has been progressing quite steadily, so that McKean County will soon be on the map as one of the foremost in eradicating tuberculosis.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Indigestion.—Stocking.—I have a 10-year-old horse that has good appetite, his hind legs stock and he is getting pot-bellied and growing thin; some swelling near root of tail. H. S. R., Danville, Pa. Feed less bulky food, more grain and give him a teaspoonful of acetate of potash once a day in feed or in drinking water. Also give him half an ounce of Fowler's Solution at a dose in feed or in drinking water three times a day.

Sitfast.—While plowing sod for corn last spring I worked a 3-year-old mare in a collar which was too large. The result is she now has a hard bunch the size of a hen egg on shoulder which I would like to have removed. M. L. A., Hokes, Pa. Have the bunch cut out and apply equal parts oxide of zinc and boric acid to wound twice daily.

Barrenness.—For the past twelve months we have been trying to get our 4-year-old cow in calf. She has been served a great many times. A. C. W., Collingswood, N. J. When she comes in heat wash out vagina with clean, tepid water, then three hours before she is mated inject her with a lotion which is made by dissolving one-quarter pound of bicarbonate of soda in half a gallon of clean, tepid water, using a fountain syringe. Immediately after she is served place her in stall with fore feet 6 inches lower than hind and keep her in this position for 10 or 12 hours.

F. B. Mahaffey, Pa.—Give your calf good care and plenty of good milk and some meal. Nature deals kindly with all young animals and it is astonishing how many of them grow strong and straighten up if allowed to live.

Bloody Milk.—How can I cure a cow that occasionally gives bloody milk? This year she milked around twenty quarts when she freshened. At first her milk was all right. Then about two months ago blood appeared in her milk again. It is so bad at times that it has the appearance of small pieces of liver in the milk and again maybe one milking out of six it will be free from blood. One of her teats has a noticeable lump inside it. The blood, however, does not come from this teat alone, but from one at one time and then another. Up to a week ago the blood came from one of her front teats, now it comes at times from one of her hind teats. T. B. L., Freehold, N. J. Blood may escape with the milk when the udder has been injured by blows, also when it is congested or inflamed, when the circulation thru it has been increased by richer and more abundant food, or when the cow is under excitement of heat. Deposits of tubercle or tumors in the udder, or induration of the gland, may be efficient causes. The irritation caused by milking contributes to draw the blood. The treatment will vary with the cause. If you believe the food too rich reduce the supply. If you believe she bruises her udder, remove the cause. If rough milking be the cause, use gentle pressure. If you find bunches in udder have her tested with tuberculin. Apply iodine ointment to bunches daily. Careful milking is imperative.

45 Years on the Line
COME TO HEADQUARTERS FOR
COTTON SEED MEAL
OWL Brand DOVE Brand JAY Brand
F. W. Brode & Co.
Established 1875.
Incorporated 1915.
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THICK, SWOLLEN GLANDS that make a horse Wheeze, Roar, have Thick Wind or Choke-down, can be reduced with ABSORBINE also other Bunches or Swellings. No blister, no hair gone, and horse kept at work. Economical—only a few drops required at an application. $2.50 per bottle delivered. Book 3 R free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Cysts, Wens, Painful, Swollen Veins and Ulcers. $1.25 a bottle at dealers or delivered. Book "Evidence" free. W. F. YOUNG, Inc., 154 Temple St., Springfield, Mass.

Shoo-Fly THE ANIMALS' FRIEND For keeping Flies, Gnats and many other insects off animals. Used and endorsed since 1885 by leading dairymen. Cows give 25 per cent to 35 per cent more milk during fly season if sprayed with Shoo-Fly. $1.50 WORTH SAVES $20 in milk and flesh alone on each cow in a single season. Excellent for galls. Allays itching. Aids in healing cuts and sores. Excellent for lice and mites in poultry houses.
Send $1.50 for enough Shoo-Fly to protect 10 cows 2 weeks, also our 3-tube gravity sprayer. Money back if not satisfactory. Name Express Office. Booklet FREE.
SHOO-FLY MFG. CO., 1342 N. 10th St., Phila

DIGESTER TANKAGE FOR HOGS Write for prices, feeding directions, etc. IDEAL RENDERING CO. NORTH WALES, PA. IDEAL MEAT SCRAPS TRADE MARK

Tonic for HORSES run down or affected with Heaves A run-down, sluggish, "heavey" horse can't do its full share of work. Tone up his system, cure the Heaves and you have a horse worth its full value in work or in money. Send today for Fleming's Tonic Heave Powders $1.04—war tax paid—per pkg. Satisfaction or money back. Fleming's Vest-Pocket Veterinary Adviser helps you distinguish heaves from other ailments. Write for the Adviser. It is FREE. FLEMING BROS., Chemists 253 Union Stock Yards, Chicago, Illinois

Poultry

200,000 CHICKS Reds, Rocks, Leghorns, Minorcas and Broilers at rock bottom prices by Parcel Post. Prepaid and safe delivery guaranteed. Our 11th year. Catalog free. KEYSTONE HATCHERY, Richfield, Pa.

COCKERELS: Barron 300 Egg Strain S. C. White Leghorn 16 wks. old husky purebred cockerels. Sired by prepotent males, out of extra high producing hens. A fine chance to improve your flock at small cost. Carefully crated, $5 each, express prepaid. LEONARD STRICKLER, SHERIDAN, PA.

Look! BABY CHICKS $14 a 100 up! By insured parcel post, postage paid. 40 breeds chicks, 4 breeds ducks. Get June and July chicks for January layers. Catalog free, stamps appreciated. NABOB HATCHERIES, GAMBIER, OHIO.

Sicilian Buttercups Farm range, prize winning Buttercups. Investigate this wonderful variety. Write for circular. MAPLE LAWN FARMS, CORTLAND, N. Y.

SPECIAL Barred Rock Chix, $15 per 100; Reds, $17; White and Brown Leghorns, $13 per 100; Anconas, $20. Each week, prepaid, 'alive.' E. R. HUMMER & CO., Dept. T, Frenchtown, N. J.

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter. SELBY PRODUCE CO., PHILADELPHIA

That Lay and Pay Beautiful Buff Rocks. Vigorous and prolific. Eggs, $1.50 for 15, balance of season. M. W. THOMAS, Chestertown, Md.

S. C. WHITE LEGHORN 2-year hens, also fine early hatch cockerels. Will sell at low prices. C. P. SHIREY, STEWARTSTOWN, PA.

PULLETS, BARRENS, 16 weeks and laying pullets $1.50 and $2.00 each. Breeders, $1.75; Roosters, $1. G. ROUTZAHN, ASPERS, PA.

Indiana, Pa., July 7, 1920
Please discontinue my ad for the present as I am about sold out. Had plenty of inquiries from Penna. Farmer readers for all the O. I. C.'s I could spare this season. Thanks very much.
EDWARD N. LYDICK

BRADFORD COUNTY PENN'A
SPECIAL OFFERS OF PURE BRED LIVESTOCK
JERSEYS.—Mixed car load of females, also several young bulls. Registry of Merit and Cow Testing Association Records.
HOLSTEINS.—Several Bulls, 6 to 10 months old, A. R. O. dams. Excellent Breeding.
SEVERAL YOUNG BULLS of good breeding, at reasonable prices.
GUERNSEYS.—Herd dispersal, largely imported blood.
AYRSHIRES.—Few young females.
All of the above are pure bred cattle with proper registration papers. Address inquiries to D. K. SLOAN, Secretary. Towanda, Penna.
BRADFORD COUNTY LIVESTOCK BREEDERS' ASSOCIATION.

TIOGA COUNTY PENNSYLVANIA----THE HOME OF HEALTHY HOLSTEINS
PUREBREDS AND GRADES
40 herds under State and Federal supervision and many more on the waiting list
TIOGA COUNTY HOLSTEIN BREEDERS' ASSOCIATION
An organization backed by 100 paid memberships for the purpose of assisting its members in producing
GOOD HEALTHY HOLSTEINS
We invite inspection—Address all inquiries to
PAUL P. KORB, Secretary. WELLSBORO, PA.
TIOGA COUNTY HOLSTEIN BREEDERS' ASSOCIATION

MAPLE LAWN HOLSTEINS High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins. C. W. Ellis, Jr., Maple Lawn Farms, Cortland, N. Y.

200 BLACK and WHITES and RED and WHITES 200 We buy and sell the very best cows obtainable, and solicit trade from buyers who want the best, cows weighing from 1000 to 1300 lbs.; some are fresh, balance from 1 to 10 weeks away. If you want the best we want your business. And we can please you. We buy and sell continually and have 200 to select from. F. L. PALMER & SON Moravia, N. Y.

MILKING SHORTHORN BULL CALVES of the best breeding. Also a few females for sale. C. M. KENNEDY & SONS, ULSTER, PA.

Reg. Holstein Bulls from calves to serviceable age. Herd tuberculin tested under Federal and State supervision. BONNYMEADS Farms, Harrisburg, Pa. R. 1

Reg. Holstein Bull Calves, from officially tested dams and a 30-lb. sire. Write for prices, pictures and pedigrees. Walter M. CRUTTENDEN, Forty Fort, Pa.

SUNNYBROOK GUERNSEYS 40 head, free of tuberculosis, bull calves for sale. EDWIN B. MAULE, COATESVILLE, PA.

Brown Swiss Pure Bred Bulls for sale. Fine as silk. Come and see them. G. EUGENE BOWN, FORKSVILLE, PA.

Ayrshire Bull Calves From high record A. R. Dams. ROBERT TEMPLETON & SON, ULSTER, PA.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale. MILLARD E. BASEHOAR, Littlestown, Pa.

REG. SHORTHORNS FOR SALE. Cows with calves; heifers, bred and open; also some choice young bulls. Farmers' prices. R. H. LYLE, CADIZ, OHIO.

MID-SUMMER SALE OF AYRSHIRES A fine selection of heifer calves, bred heifers, and young cows in this offering. Excellent opportunity to found or build up your herd with animals from the best breeding backed by large records. Prices reasonable—Tuberculin tested, no reactors. CRESTMONT FARM, SUNBURY, PA

Swine

BIG BLACK BERKSHIRES Write for prices or come and see the fine bred gilts and young sows ready for breeding in the Fall, that we are offering at bargain prices. The bred gilts are part of our foundation herd. For reference—our satisfied customers. CRESTMONT FARM, SUNBURY, PA.

FAMOUS O. I. C.'s The world's grand champion herd—Home of two grand champion boars, one grand champion sow. Write for illustrated catalog. It is free. Stock of all ages for sale. CRANDELL'S PRIZE HOGS, Cass City, Mich.

LANCASTER COUNTY HAMPSHIRE SWINE Choice breeding stock, all ages. The best of breeding and out-standing individuality. Trios of spring pigs not akin. Thirty-six prominent Eastern herds to select from. We ship only the very best quality registered stock. Prices right and satisfaction guaranteed. State your wants when inquiring. The Lancaster County Hampshire Swine Breeders Co-operative Association. Address— S. R. ZUG, Secretary, LAMPETER, PA.

PATHFINDER'S RIPPER By PATHFINDER dam by Great Sensation, heads our Duroc herd. Line bred Pathfinder offering of 40 head at Public Auction Dec. 2nd. Get a catalog. SLATY RIDGE FARM, Palmyra, Pa. Box 3.

Hampshires Eastern Quality Herd, National Swine Show and State Fair winners. Also Guernsey cattle. Free Cir. Locust Lawn Farm, Bird-in-Hand, Box 2, Lanc. Co., Pa.

HAMPSHIRES All ages. Strong and vigorous stock. When you buy you want the best, don't you? Then write us. Inspection invited. ROSS B. WITMER, LAMPETER, PA. Member Lanc. Hampshire Breeders' Co-operative

REGISTERED DUROC-JERSEY PIGS $10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs. C. W. Ellis, Jr., Maple Lawn Farm, Cortland, N. Y.

Try Reg. Big Type Spotted Poland Chinas. The hog of the hour. Write for prices. Satisfaction guaranteed or money refunded. G. CLYDE THOMPSON, Chambersburg, Pa., R. 10.

EDGEWOOD HAMPSHIRES Everything sold. Booking orders for gilts bred for fall farrow, and pigs for Pig Club work only. DEPEW HEAD, MARION, OHIO

Large Type Reg. Berkshires of all ages for sale. Select a breeder from a large litter. Pay when you see stock. No cash in advance. DAVID WIANT, HUNTINGTON MILLS, PA.

FOWLER'S PURE BRED HAMPSHIRES Will please you. Best and largest herd in East. THE FOWLER FARMS, MACUNGIE, PA.

Special Sale REGISTERED DUROC SOWS bred for Summer farrow, $65.00 each, registered and express paid. BELROSE FARMS, RICHFORD, N. Y.

Registered Durocs Best blood lines. Sold out at present. Will book orders for spring pigs. Northumberland County Duroc-Jersey Breeders' Association, J. M. FRY, Corresponding Secretary, Sunbury, Pa.

TARRYMOOR BERKSHIRES Quality, Growthiness, Prolificacy. We guarantee satisfaction. Robt. E. Atkinson, Wrightstown, Pa. Bell Phone.

O. I. C. PIGS 8 weeks old, registered free, to be delivered in September. L. B. Silver's strain. Satisfaction guaranteed. THE OAKS DAIRY FARM, WYALUSING, PA.

REG. DUROCS Large size, heavy bone, best blood lines, prices reasonable. Satisfaction guaranteed. JOHN W. COX & SON, New Wilmington, Pa.

CHESTER WHITE PIGS.—A fine lot now ready to ship, either singly or in pairs. R. L. MUNCE, Canonsburg, Pa.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, Center Valley, Pa.

DUROCS. Sept. boars ready for service. Also 2 Spring boars. Sept. Gilts bred for Sept. Spring pigs not akin. All im. I. D. Jackson, R 10, Van Wert, Ohio

BIG TYPE POLAND'S Baby herds a specialty. KEYSOR & CLELAND, Greenwich, Ohio.

Chester Whites Boars and Sow Pigs. Bred Sows. Collie dogs. ARCADIA FARM, BOX D, BALLY, PA.

REG. O. I. C'S, all ages. Open and bred gilts at prices to move them. Black Diamond Minorca Farm, Mt. Bethel, Pa.

O. I. C. Pigs, either sex. We ship on approval and register free. L. B. COFFMAN & CO., Palmyra, Pa., R. 2.

Reg. O. I. C.'s Booking orders for Spring pigs. Silver strain breeding. BRUBAKER BROS., Star R., Cocolamus, Pa.

Hampshire Hogs, bred sows, and 8 and 10 weeks old pigs. A. H. FUNSTON, WILLOW HILL, PA.

CHESTER WHITES For Sale. Service boars and young pigs, all ages. ALLAN R. MORTON, ASHVILLE, N. Y.

Nelson's Berkshires 4 months old pigs, $25. With size and quality; guar'd to please. W. D. Nelson, Jr., Marshallton, Del.

HILLPOT CHICKS THAT PAY. HILLPOT QUALITY CHICKS

GET THEM NOW It's not too late. Easiest time of year to raise baby chicks. Furthermore, Hillpot Quality Chicks are from pure-bred, farm-range stock. Note these low prices:

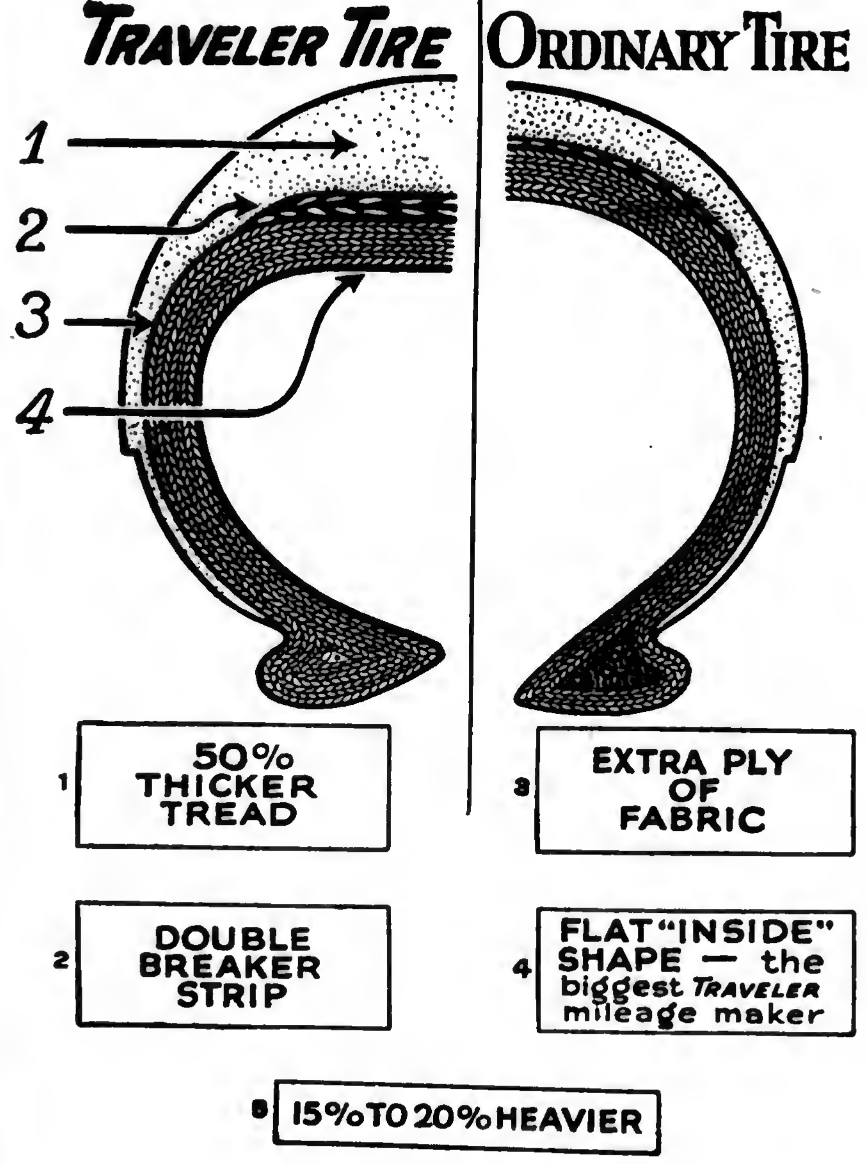
	100	50	25		100	50	25
White Leghorns ...	$15.00	$7.50	$4.00	Barred Rocks....	$18.00	$9.25	$5.00
R. I. Reds	20.00	10.25	5.25	White Rocks or Wyandottes ...	25.00	12.50	7.00
Black Leghorns	15.00	7.50	4.00				

Sent postpaid. Safe delivery guaranteed. Terms cash with order. Cannot send C. O. D. W. F. HILLPOT, Box 28, FRENCHTOWN, N. J.

Compare these points with any other tire

We have just spent several hours reading tire advertisements and comparing their talking points

We were astonished at the "sameness" of their selling talk or the over emphasis of one point. It was interesting to check each tire against the Traveler Tires' points. We took notes as we read the ads and we give below the comparison of ALL their COMBINED talking points with those of the Traveler.



These "points" are not in the order of their importance but just picked as we happened to run across them in the magazines.

	Combined Advertising Points of a Hundred Other Tires		**TRAVELER TIRES Advertising and Performance Points**
1.	Guarantee and wear.	1.	6000 miles—7500 on Fords. Six years' records show consistent mileage way over this guarantee.
2.	Manufacturers "intent" — since the markets are open and machinery standardized.	2.	Traveler has the BEST material, workmen and tire machinery.
3.	Best rubber in tread — special process.	3.	Traveler has the rubber compounds proven by exhaustive tests and years of wear to be the toughest and best.
4.	Non-skid.	4.	Traveler has a fine non-skid—and without forming gas-eating vacuums.
5.	Appearance.	5.	Look at a Traveler—distinguished looking.
6.	Workmen.	6.	Traveler workmen are picked tire builders.
7.	Tests.	7.	The most practical test is years of usage. Travelers' 6-year record on thousands of cars is the proof.
8.	Uniformity.	8.	On only 1 Traveler in 400 is a CLAIM for adjustment made.
9.	Cost per mile figured on guarantee and original cost.	9.	Figure the Traveler against any other tire. But we would rather you used the actual mileage DELIVERED, for the Traveler doesnt stop at its guarantee.
10.	Thickness of tread.	10.	Traveler's tread is 50 percent thicker. And yet it is perfectly balanced and cool running.
11.	Traction surface.	11.	The Traveler runs on a narrow apex—a fast tire and economical with gasoline.
12.	Method of fusing breaker strip and cushion stock.	12.	Traveler tread is guaranteed never to come loose regardless of the mileage.
13.	Quality fabric.	13.	We buy the best the market affords—and it is even better than most other fine tires use.
14.	Double breaker strip.	14.	The Traveler's breaker strip is double.
15.	Extra ply of fabric.	15.	The Traveler has an extra ply of fabric.
16.	Cable in the base.	16.	The Traveler base is the best it can be made. A toughened rubber core protects the Traveler against rim cut.
17.	Single cured, hand wrapped.	17.	The Traveler is single cured, hand wrapped.
18.	Hard to puncture.	18.	The Traveler is 90 per cent. puncture-proof because of the thick tread—only possible because of the flat "inside" Traveler construction.
19.	Heavier weight—the true way to find the amount of material in a tire.	19.	The Traveler is 15 to 20 per cent. heavier than the average.
		20.	The flat "inside" shape, saving side wall strain and wear, is the biggest Traveler mileage-making point. And it is exclusively a Traveler point.

See your Traveler dealer now or write us direct

THE TRAVELER RUBBER CO. of Bethlehem, U.S.A.
Bethlehem, Penna.

TRAVELER TIRES

PENNSYLVANIA FAR[illegible]ER
AGRICULTURE THE KEYSTO[illegible]E OF NATIONAL PR[illegible]ITY
ESTABLISHED 1880
PUBLISHED WEEKLY
Published by The Lawrence Publishing Co., 261-63 So. Third St., Philadelphia, Pa. Entered as Se[illegible] at the Post Office at Philadelphia, Pa., under the Act of March 3, 1879.
Vol. 48—No. 6 PHILADELPHIA PA., SATUR[illegible]AY AUG[illegible]T 7 1920 75 Cents per Year

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New Brunswick N J

What Sociability Means to Farm People

An Interest in Our Neighbors and Newcomers will Make a Better Community

Mabel G. Feint

Dryden, N. Y.

At the last meeting of the writer's Home Bureau Club some interesting facts as to the sociability that prevails in some eastern farming regions were brought out.

A member told a pitiful tale of the poignant loneliness that too often exists here in our populous East. She with her husband last year had taken a long drive through the surrounding country in search of pigs. They inquired for pigs at many places and followed up many suggested sources of the pork supply. Finally they drove into a yard in a distant town where a sign told of "Pigs For Sale." The family proved to be an English one that had moved there some months before coming to that locality from the West.

The call was brief, being purely a business one, though there was an exchange of friendly courtesies. In a few days our Club member was startled to hear the statement, over the telephone, by the Englishman, "I am coming to your house to dinner tomorrow and will bring my family."

She rallied bravely and replied, "I am glad to hear it. We will be at home and will look for you." The visit was made and later developments brought out the fact that the entire family was actually suffering from homesickness and loneliness, the neighborhood they had unfortunately chosen to settle in being one of the far too usual indifferent, unsociable ones of the East.

The English husband and father, who has since lost his wife, made the emphatic statement, "The sociability of you Eastern people is pitiful."

They were made cordially welcome and were later taken to call upon a neighbor whom the husband had once met on a chestnutting expedition. The Club member used the story as an example of the desperate state of mind too many of our new western neighbors are driven to when they come into our communities where everyone has known everyone else all their lives.

The tale led to a vigorous inquiry as to all farms that were for sale or to rent or that had been recently sold. All the members were delegated to welcome all newcomers in person so far as possible. A "Welcome to the Farm" committee was established, the chairman to write a letter of welcome to new people and to urge them to join the Club and join in all neighborhood activities. One woman from the West, who has been here a year, burst into tears during the discussion at the memory of the lonely days she had had before the Club influence made her feel more at home. She had never before lived on a farm and found the loneliness of the winters particularly hard to bear.

Another western member told of the jolly times she had had in her three years on a farm. This western woman had lived in New York. She had had no vacation and now expected none, but had always had one in her former community, where twelve families joined in relieving each other of chores, going for a real vacation by groups.

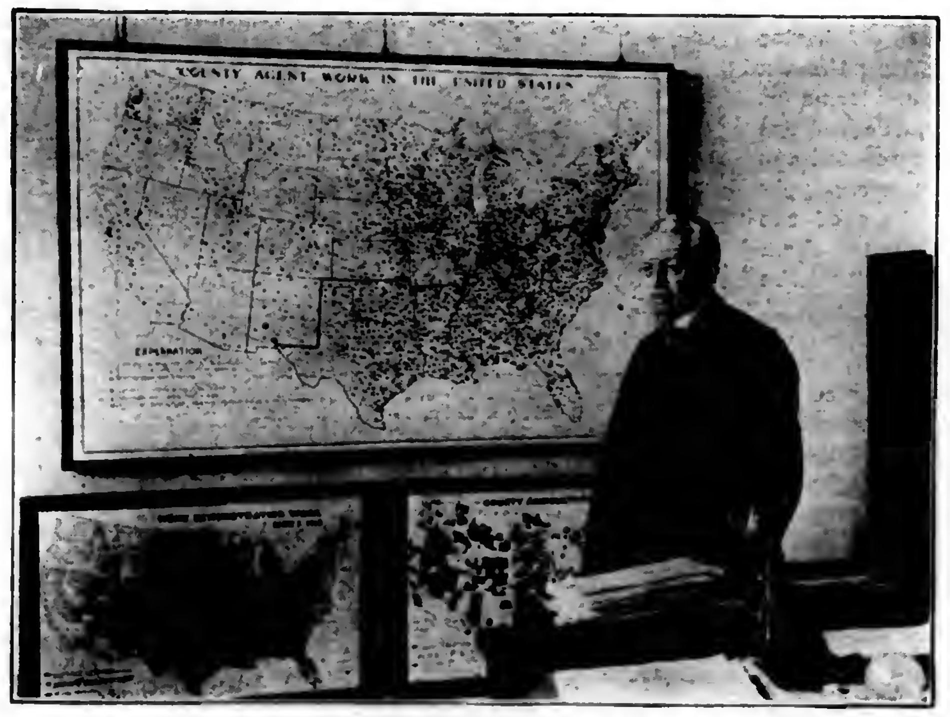
It is of interest to note that of seventeen typical farm women nine had never had a vacation and expected none; one had had two in fifteen years; one had one eight years ago, while others referred to short trips to former homes, usually over night—never over two or three days—as their only vacations.

Yet these women were not embittered. They realized that country life has compensations and this will be brought out in our next meeting, when the roll-call response will be "Why Country Homes Are Best." At this time the home economics department of a nearby city club will be the guests, on their request, and a splendid program is being arranged.

To return to the question of sociability, the writer knows a man who sold his farm last spring to a western buyer and who is now developing gray hairs for fear the farm will come back to him. The buyer likes the proposition but his wife is terribly homesick. There is no sociability worthy the name in the community.

The remedy would be to have the women of that locality develop at once some live social interests, for their own sakes as well as of newcomers. I know of no better social agent than a good Home Bureau Club, with frequent family attendance at the meetings and programs on live topics. If the local members are too timid to take part in these at first, get outside speakers for a time and as fast as possible urge all members to discuss questions freely, the choice of topics being always within the grasp of all.

(Continued on Page Fourteen.)


COUNTY AGENT WORK IN THE UNITED STATES

Dr. A. C. True, of the Department of State Relations, U. S. Department of Agriculture

Potatoes Grown from Specially Selected Stock on Farm of J. F. Vanderveer, Hightstown, N. J.

Producing Registered Field Seeds

Showing What Has Been Done in One State With Wheat and Rye

By A. L. Bibbins

Registration has become an American household word. Our great-grandfathers started work when they put into effect the registration of cattle, sheep and hogs, with the result that today no farm animal dare raise its head unless it be of registered blood.

Michigan farmers, catching the spirit of registration, started and now have put into effect the latest of registry systems—namely, that of registering seed. The service resulting is of invaluable aid not only to farmers in Michigan, but also to those of several other states, who annually go to Michigan for seed.

Michigan Crop Improvement Association

In the past, plant breeders have given agriculture many superior strains, but in a comparatively short time these have usually become so badly mixed and impure as to be discarded and lost.

Realizing the value of good seed and the importance of maintaining the high standards of the plant breeder, a large number of leading farmers organized themselves into the Michigan Crop Improvement Association, with the purpose of having available an ample supply of high quality seed whose source, genuineness, purity and quality were known and guaranteed.

During the ten years that the Michigan Crop Improvement Association has been in existence, very gratifying results have been accomplished. To the members of the Association is due a great deal of credit for the present high standing of not only Rosen Rye and Red Rock Wheat, but also many other strains such as the Wolverine and College Wonder Oats, Michigan two-rowed and Michigan Black Barbless Barley, etc.

Agricultural College Co-operating

The Michigan Agricultural College originates and develops the strains and after giving them a thorough trial at the College and on farms at several points throughout the State, the College increases those varieties which have proven to have superior yielding ability. Soon there is a supply of seed for distribution to the members of the Association, and lots are forwarded to them directly from the experiment station and thus the source and heredity of the seed is known.

Seed Inspection

In order to maintain the high quality of the seed great care is taken to prevent the pure-line strains from becoming mixed with other varieties or infested with weeds and diseases. Shortly before harvest the Michigan Crop Improvement Association conducts, under the supervision of the Farm Crops Department of the Michigan Agricultural College, a rigorous and thorough field inspection. The field of pure-line strains are visited by authorized inspectors, who being thoroughly trained in agronomy, plant pathology, botany and entomology, apply their knowledge to ascertain the genuineness, purity and freedom of disease and weeds, of the fields under question.

Exceptionally high standards have been established by the Association and fields which measure up to these are given a certificate of field inspection. Great care is taken at harvest and in threshing, after which a final inspection is made to determine the following points:

1. Weight per bushel;
2. Germination;
3. Color and general quality;
4. Freedom from foreign matter;
5. Freedom from disease, and
6. Freedom from weed seeds.

Registration of Seed

By this follow-up work and the unbiased inspections afforded by the Agricultural College, the genuineness and purity of the seed is absolutely known.

Seed which successfully meets the high standards of the Association is certified and given a registry number. The registry system is quite similar to that employed with cattle, for the ancestry of the seed is traced back to the original plats at the College Experiment Station and the inspections demonstrate the pureness of the strain.

Registered seed is sold under the tag and trade-mark of the Association and is guaranteed as to trueness of name, purity and quality. A seed list is printed which carries the names of the various members who have registered seed for sale, with a complete analysis of each grower's seed—thus a rather complete picture is furnished of each lot of seed.

Rosen Rye and Red Rock Wheat

Much of the success of the registered seed movement has been with Rosen Rye and Red Rock Wheat. These two valuable strains or varieties were developed by Professor Frank A. Spragg, of the Farm Crops Department, Michigan Agricultural College, and have proved to be very popular in several sections of the United States.

Head of Red Rock Wheat

The Rosen Rye is a stiff strawed, heavy stooling, hardy winter rye, that has repeatedly produced yields far superior to those of common rye. The heads of Rosen Rye are very long and well filled. Common rye often has many vacant places in its head, but not so with pure Rosen, which endeavors to produce large, plump kernels wherever there is room for one. So prolific in its yields is Rosen that very often branched heads and even six-rowed heads are produced. On account of its high milling qualities it is very well liked by millers and also by the European trade.

Gol Dern, ye, I Thought I Had All You Fellows Killed Last Year!

In that rye cross pollinates like corn, only a small percentage of the so-called Rosen is p Growers should demand pure Rosen, for if imp Rosen be used maximum yields cannot be expect

Red Rock Wheat is a high yielding, hea stooling, stiff strawed, hardy winter wheat wide adaptation. It has been the experience growers that Red Rock wheat is one that retu exceptionally high yields if given at all favorab conditions. Farmers who use Red Rock on goo wheat soil and on well prepared seed beds, repor excellent yields. It has been stated by man growers that Red Rock has no equal in returnin profit from the use of acid phosphate. Many mil ing and baking tests have shown Red Rock to one of very high milling qualities; in fact, mille in some instances have paid a premium of five ten cents per bushel for the Red Rock Wheat.

A survey of the State of Michigan clea demonstrates the value of good seed. There thousands of acres of registered Rosen Rye, R Rock heat, Wolverine Oats and Michigan Bla Barbless Barley annually produced in Michig Growers take a great deal of pride and interest this production of pure seed and often commu ties standardize upon one variety or strain wi the result of high yields of grain that are exce tionally free of disease and weeds.

Tractor Pays for Itself

By W. S. Hoover, Kent Co,, Md.

I own a farm of 210 acres in Kent Count Md., which is level and free from stone. In t summer of 1918 I found myself using twelve he of mules in the operation of this farm. I h never owner or operated a tractor before, and or about September 1st I purchased one wi plows, paying $1025. I seeded 100 acres of wh the same fall, doing all the work with the trac with the exception of pulling the drill.

I had no expense at all for repairs in 1918, used $24 worth of oil and kerosene on the abo work (not the price of one ton of hay).

I also sold mules enough that fall to pay the tractor and I only keep four mules on t farm, also dispensing with two teamsters that c me $6 a day (and lots of worry). Where I h been in the habit of keeping 500 bushels of co to feed the above-mentioned mules I sold do to 100 bushels, which I found to be sufficient, I do not keep cows but grow grain for market. also sold $200 worth of hay that the mules wou have eaten.

The tractor was idle during the winter month except sawing wood for farm use and was hous away and required no attention all winter, b had eight less mules to attend to twice a day winter.

In the spring my neighbors were out ear with their mules plowing their ground for cor while it was wet and cold. I let my tractor alo until May 1st (neighbors' corn was planted a up). The second week in May took my tract and plowed my 30-acre field for corn in five day worked the ground ready for the planter, usi two mules to planter. The soil was warm a in fine condition; all came up, no replanting, a went ahead of any corn in the neighborhood a cribbed 70 bushels to the acre. I also want point to the fact that it is impossible to plo land with horses like you can plow it with tractor.

How did I harvest? I took my seven-foot c binder, sawed the tongue off, had the blacksmith make me a hitch and hooked up to the tractor My wife put on a pair of overalls and rode th binder and I drove the tractor and we cut 35 acre a day and could have cut more if I had ha shockers enough. Where were my four mule while I was cutting wheat? In the corn field cu tivating corn. The weather never gets too ho for the tractor to pull the binder, which is ofte the case with the horses.

My total expense for repairs for 1919 wa $4.40 and I have sold enough hay this fall to kee my tractor in kerosene and oil for several yea to come (which otherwise would have been co

(Continued on Page Fourteen.)

DESIRABILITY OF GRADES AND STANDARDS

The United States Bureau of Markets and several of the State departments of agriculture have issued grades and standards for certain farm products. So successful has been the use of these grades that the demand for work of this kind is greater than the ability of those who have done the work to accomplish.

The work which perhaps established this fact most definitely in the minds of the farmers generally was the promulgation of the United States potato grades. U. S. Grade No. 1 of any of the common varieties is as definite a thing as Ivory Soap or a cake of Fleischman's yeast.

When the United States started to build ships "and more ships" the first thing determined on was a standard. We have today a great merchant marine and in the most part it is due to the establishment of a standard, and that standard was made in plain and understandable terms. A steel ship of 8000 tons required certain items for its construction, and every 8000-ton steel ship needs the same items no matter who builds it; quantity production resulted.

This idea, applied to agriculture, is one of the things that will put food production "over the top" in America today. It costs less to produce and to market standardized products than those not standardized.

A brief analysis of this will show what the writer has in mind. Standardization should begin with the seed used. Good seed true to type is the first standard necessary. Proven and standardized cultural methods should be practiced. Simple and efficient methods of harvesting easily reducable to standards of operation are certainly necessary.

Standards of grade and packages, usually established by law, have made it possible for the producer to cut his overhead expense and the use of standard packages has lessened the time consumed in packing, hauling and loading. Package concerns producing standard packages can put them out in greater quantity and at less cost than if they produced a great variety to meet individual ideas.

Reputation before the establishment of grades and standards was about all the reliable farmer had to fall back on. But reputation, essential as it is, cannot reduce the costs of marketing, for without definite units and terms by which to designate the product the buyer had to see and inspect the goods before he could be satisfied as to their quality.

The Pennsylvania Bureau of Markets, by the act of the Legislature defining its duties, is charged with the promulgating of grades and standards for farm products. This work cannot and will not be done arbitrarily so long as the present organization is maintained.

Hearings will be held on all proposed grades and standards and interested parties wil be given an opportunity to be heard on all points in question.—J. C. Gilbert, Acting Director Pennsylvania Bureau of Markets.

NEW YORK TROOPERS DO GOOD WORK

Where are the hobo wanderers who formerly touched all the crossroads of New York State? Many are wondering just why the useless and often criminal transient no longer is seen on the highways of the State. The answer is the rider in gray—the State Trooper—who has made life in New York uncomfortable for the tramp.

It was not many years ago that New York was infested with great numbers of wanderers, and their thievery and other crimes made the farmers fearful and cost the State many hundreds of thousands of dollars annually. Pennsylvania became free from tramps when it established its State Constabulary and New York has had a similar experience. The tramps are now wandering in New Jersey, Connecticut and Massachusetts and a demand is said to be arising in those states for the development of constabularies.

High wages are not the answer to the absence of tramps. They still exist in numbers in states without constabularies, a teaching nucleus for young boys with the wanderlust to join and become worthless hoboes.

Criminals also are learning that plundering country stores and houses is no longer safe. They no longer find the country a safe hiding place after the commission of a crime. The men in gray are riding alertly as the police force of the country districts. The State Troopers have been doing great work in apprehending criminals who have driven automobiles into the country to escape arrest. The State Troopers and police forces of the cities have made New York State such a dangerous place for criminal operations, especially in the country districts, that criminals are finding it more profitable to hide in other states where 100 percent policing does not exist.

Hauling Hay and Loader with Tractor

The work of the State Troopers on road patrol is earning them the respect of the motorists. These supervisors of safe motoring are riding their motorcycles to enforce the law in a way just to motorists and all users of the highways. There are 232 of them on the job on the roads of the State and each has been given this message by Major George F. Chandler, Superintendent of the New York State Troopers:

Tractor Power as a Solution of the Labor Problem

"Dont' annoy because you have the authority. Dont make petty arrests for petty misdemeanors, but arrest relentlessly the real lawbreaker."

When disorders have arisen in several cities the State Troopers, according to Major-General John F. O'Ryan, have proved specialists in maintaining quietness. When the Batavia police force found itself five men short this spring thru sudden resignations, Troop A was appealed to. Troopers took their posts in Batavia as policemen and remained efficiently on the job until Mayor Prentiss was able to reorganize the police department.

A total of 4271 men and women were brought to justice by the State Troopers in 1919, and 3698 were convicted and the cases of 333 were still pending a short time ago. Only 6 percent of those arrested were discharged, showing that the State Trooper is not given to making false arrests.

—A. H. Pulver, Wayne Co., N. Y.

RABIES OR HYDROPHOBIA

Rabies can be transmitted only by animals that are actually diseased at the time. There is no foundation for the belief that persons killed by a dog which subsequently becomes rabid, may contract the malady, according to Farmers' Bulletin 449, which has just been revised and reissued by the U. S. Department of Agriculture.

It is a specific, communicable disease affecting all warm-blooded animals, including man. The dog is especially susceptible, and because of his roving habits is the chief disseminator of the disease.

The bite of a rabid animal is not necessarily fatal; the virus is estimated to be transmitted in about 30 percent of cases. But when the disease is contracted and not treated it is practically always fatal.

The Pasteur treatment prevents many fatalities, but even with this there is much anxiety, suffering, hardship and expense.

This terrible disease is all too prevalent in the United States, in spite of the fact that its suppression is comparatively simple. The problem is solved when the rabid dog is eliminated. This is proved by the experience of some other countries, notably Norway, where the disease has been entirely stamped out.

A similar result might be brought about in this country, with the co-operation of the States, by (1) licensing all dogs, (2) muzzling all dogs not otherwise kept in restraint, and (3) rigid inspection and quarantine at borders and ports of entry.

All of these points are enlarged upon in the bulletin, which may be secured free of charge by writing to the Division of Publications, U. S. Department of Agriculture, Washington, D. C.

The nature and characteristics of the disease, symptoms, methods of spreading the disease, distribution and prevalence, and methods of control are clearly explained.

WATERPOWER ACT FINDS FAVOR

Already applications for more than one-half million horsepower have been filed with the Forest Service of the United States Department of Agriculture in connection with the water-power bill signed by the President on June 11th.

The increasing cost of fuel and the difficulties of its transportation have put a premium on water power, say Forest Service experts. It is expected that the legislation will mark the beginning of a new era in power development in the United States. Big developments are to be undertaken soon in the East, South and West.

The act applies to all power sites on public lands and reservations and on the navigable waters of the United States, including international boundary waters. Its administration is charged to a commission comprising the secretaries of War, Interior, and Agriculture.

WAR AND FERTILIZERS

A recent bulletin from the New York Experiment Station at Geneva discusses the effects of the war upon the kind, composition, and cost of commercial fertilizers. In the case of complete fertilizers the average retail cost of one pound of plant-food increased year by year after 1914 from 8.8 cents in 1914 to 33.1 cents in 1919. Detailed information based on data collected during the years 1914 to 1919, inclusive, is given in Bulletin No. 471, which may be had free of charge upon application to the Station.

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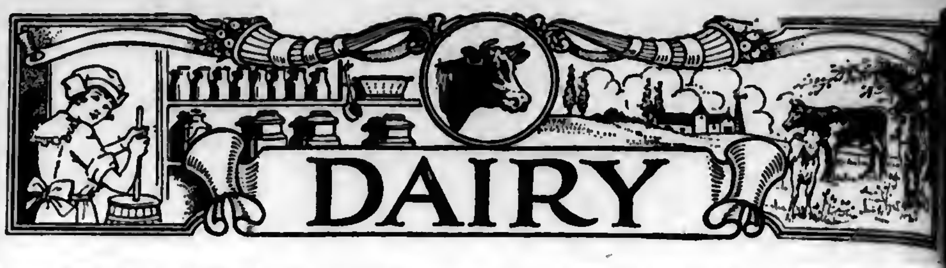

SILAGE FOR ALL STOCK

As silage is our cheapest source of digestible carbohydrates, it can be used protfiably by any animal which feeds upon grass. The breeders of beef cattle have for many years used the silo with success, not only for feeding their mature animals, but also for growing the young stock. There has been more investigation among our experiment stations to determine the economic value of silage as a beef-maker than in any other line of feeding work. Hardly an experiment station equipped with a silo but what has made some test along this line, and it is interesting to note that practically every test has demonstrated that silage not only makes beef cheaper than other foods, but also makes a high quality of beef. Most of the breeders of champion show stock are using silos, and they would certainly laugh at any man who questioned their silage ration.

Horses and mules have been fed silage successfully and economically. The Pennsylvania, Michigan, Missouri and North Carolina Experiment stations all found excellent results from feeding horses silage. Some of our large breeders and dealers in blooded horses have used silos for many years and there is scarcely a farmer with a silo who does not feed silage in some form to his horses. Of course it should be used much as grass is used; that is, in small rations and principally for horses not at heavy work. Only good silage should be used in the horse ration.

As a ration for sheep it has long met with success, and there are many feeders who use it on a large plan. Not long ago I visited a sheep feeding farm where ten thousand sheep received corn silage as a part of their ration. It has hardly come to its own in this capacity, but the sheep feeder will certainly use the silo more in the future, especially if he wishes to make economic gains.

On the average farm where all kinds of livestock is kept, care should be taken to put up the very best quality of silage. This generally can be accomplished by cutting at the right period, giving care to bring as quickly from the field to the ensilage cutter as possible. Cut fine with sharp knives and pack well. These are the principal requirements for good silage. Of course it is expected that the silo be tight and smooth on the inside. With such a silo filled it stands as a bank or storehouse from which the farmer can draw at any time and from which he can always realize a profit.—A. L. Haecker.

VALUE OF OFFICIAL DAIRY TESTS

The system of advanced registration has been of great value to breeders of dairy cattle, particularly from a financial standpoint and as an aid in their breeding operations. It is profitble financially because a good record not only greatly increases the value of the cow herself and of her offspring, but of all closely related stock as well. Further, it provides authentic information upon which the selection of animals for breeding purposes can intelligently be made, and gives definite proof of improvement that is made thru selection and breeding. Official tests also raise the standard of each of the dairy breeds and increase their popularity.

1. Do you want to cull the boarders? The first discovery after beginning to test will probably be that some of your cows are not paying for their feed and care. This is not a pleasant discovery but it is profitable information. It is not good business to keep a pure-bred cow that will not exceed the requirements for admission to the advanced registry with proper feed and care nor is it profitable to continue to breed animals of inferior ability.

2. Do you want to feed your cows more economically? Everyone who has to buy feed at the high prices prevailing is interested in the amount of feed the cows will profitably utilize. With exact milk and fat records more economical feeding according to the requirements of individuals will be made. It is true that many large records are made without regard to feed cost but a good record can be made economically since it is well known that the feed eaten above maintenance is the real productive feed for milk production.

3. Do you want to select your breeding stock intelligently? Improvement in stock of any kind depends upon the careful mating of the best animals. The trained eye can judge the trueness of breed type and conformation, but the actual productive ability is determined by test alone. The only sure and impartial judges of production are the milk scale and the Babcock tester. Much is said about cows being bred for production. An authentic record of the productive ability of each animal in the herd means an official record. The future productiveness of the herd is assured if the selection of the heifers from the best cows is made on the basis of the official test.

4. Do you want to determine the value of your bull? Test your herd sire. You spent considerable time and money in buying and selecting him but do you know whether he is increasing or decreasing the value of your herd? He is the better half of the herd if his daughters are better producers than their dams. If he is the better half after you are thru someone else will gladly purchase him. A bull with known propotency is an asset both to your herd and to the breed which he represents.

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AYRSHIRE PRODUCTION RECORDS

During the quarter just finished one hundred and fourteen Ayrshire cows qualified for the Advanced Reigstry with an average production of 10,731 pounds milk, 429.92 pounds fat, testing 3.98 percelt fat.

Gossard Breeding Estates has the leading cow in Henderson's Dairy Gem with a record of 20,042 pounds milk, 803.71 pounds fat, testing 4.01 percent fat. They also have the leading cow in the Senior Four-Year Old Class. Monstone Farm, Mass., also has two class leaders. Friends' Hospital, Frankford, Pa., furnishes one class leader. No one breeder nor one State can claim a monopoly of producing Ayrshires.

The Roll of Honor records for 300-day production with reproduction of a living calf nearly within the year shows a marked increase. Ninety-seven records have been completed in this division since its adoption, of which twenty-seven were completed during the past quarter. All records completed to date in this division show an average production of 10,019 pounds milk, 404.47 pounds fat, with an average test of 4.04 percent, a highly creditable average for cows under normal or commercial freshening conditions.

COWS ON PASTURE MAY NEED GRAIN

Cows on pasture producing 20 to 30 pounds of milk a day can usually be fed some grain to advantage unless they refuse it, because of the richness of the pasture.

The use of grain for cattle on pasture depends on the condition of the pasture, the price of grain, and the price of milk, but it must be remembered that the milk and butterfat records of the months to come depend upon generous feeding now.

The milk-producing enterprise runs the year around and is dependent for the most satisfactory results upon well-grown and fully developed heifers. Those heifers especially which are in milk must be well fed if they are to give milk and at the same time complete their growth, say the specialists. Milk is now advancing in price, while feed is decreasing.

HOORAY!

"What is it that keeps the moon in place and prevents it from falling?" asked Jim.

"I suppose it's the beams," replied his brother.—Boys' Life.

O!

Pupil: I don't think I should get zero on this paper.

Teacher: Well, I don't either, but that's the lowest I could give you.—Boys' Life.

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ESTABLISHED 1880

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PHILADELPHIA, PA., AUGUST 7, 1920
VOLUME 48 NUMBER 6

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Lateness of Issue

A DISASTROUS FIRE in close proximity to "Pennsylvania Farmer" will put us to considerable inconvenience for a time and will undoubtedly cause the paper to be delivered a little later than usual. In spite of the handicap we were right on the job the next morning and the paper will go out as usual with the exception of a little tardiness in mailing which we feel sure our readers will excuse under the circumstance. The work of repair is being pushed as rapidly as possible and we hope to get back to normal schedule at the earliest possible moment.

Census Figures

ALTHO there are not enough census figures yet published upon which to base any definite conclusions as to the comparative growth of rural and urban population, the very local and widely scattered reports which have been published indicate that the growth of towns and cities have been far ahead of the growth of rural communities. In fact, it is the exception when the report of a purely rural township or county does not show a loss instead of a gain. In spite of the gains made by most towns there is a great deal of disputing of the figures, most places feeling that they have not been rightly enumerated and that they have made a greater growth than the reports indicate. Since the greater part of the growth of towns is made at the expense of the rural communities, and since a decreased number of farmers means scarcer food and congested cities, it is hard to understand the almost childish pride the towns and cities have in their increasing bigness.

Maintain The Community

ONE of the regrettable tendencies of the times is the disintegration of the community. Instead of the frequent occasions when everybody within driving distance attended every social gathering and had a good time, many communities find it difficult to get together enough interested people to conduct neighborhood affairs. The community spirit of a generation ago is waning in too many places and because of that the interest in farming and rural affairs will utimately disappear and the people will follow their greater attraction. The ease with which people can get away to larger centers is no doubt the cause of the decadence of rural sociability. Instead of developing their own resources and providing their own entertainment it is so easy to get on the trolley or into a machine and go several miles to spend a day or an evening in being entertained by commercialized amusement. By this practice people become over-critical of home entertainment and at the same time lose the power of self-expression thru sociability.

Only by frequent association in work and in play can a real community spirit be developed. That feeling of good-fellowship which is essential to team-work is the result of close acquaintance and clear understanding. These qualities are developed by the necessity of contributing something to the common cause. The most enjoyable entertainment is not paid for; it comes at the unexpected moment and in an unplanned situation, such as are most likely to occur in a gathering of neighbors. By all means, let us keep the home fires burning by maintaining some of the old time rural customs which provided entertainment and amusement of country people in times past and which developed character and independence.

Newspaper Responsibility

PENNSYLVANIA FARMER makes strenuous effort to see that nothing untrue or unsound in practice, morals and economics is admitted to its columns. We believe other reputable farm papers make the same endeavor. We assume that a newspaper or journal of any kind should feel a moral responsibility to publish only what it believes to be the truth, and if it has any question about the matter it should investigate thesubject or refuse to publish it. Daily newspapers are evidently not handicapped by any such sense of responsibility to their readers when they are dealing with subjects relating to farmers and agriculture in general. An example is found in the "Public Ledger" of July 28th. Mr. Curtis, the chief factor in this company, also publishes the "Country Gentleman." The article in question discusses the low wholesale prices of produce in the Philadelphia markets and closes with the following:

"Both wholesale and retail dealers agreed that, while prices are lower in the products in which the market is overstocked, it does not portend a general reduction to a lower price level.

"Lately, when interviewed, wholesalers blamed the retailers and vice versa. But all that has changed. Yesterday it was the farmer upon whom the onus of high prices was placed by both wholesalers and retailers. * * *

"When asked to give reasons for his pessimism concerning price reductions, a member of the firm of E. S. Woodward, at 122 Dock Street, said: 'The public does not understand the real causes of the high price of produce. It is too keen to go after the scalps of the middle-man and the retailer. There have been times in the past when both have made high profits. Just now, however, it is the farmer who is making the money, and, incidentally, boosting the prices altogether too high at the source.

"'There are two reasons why farmers are able to do this. The first is that nearly all of them have become members of "protective" organizations, usually the outgrowths of the old granges, which are in reality nothing less than price-fixing organizations. These bodies have thorough-going surveys made of conditions in the various markets, determine upon those markets where they can obtain the highest prices and then fix a price which they think their organized effort can bleed from the public."

The editorial culpability attaching to this kind of news is that it is false and is mischievous in its influence. It is the duty of an editor to refuse publication to harmful statements, regardless of who makes them, unless they are used as a basis for refutation. Just at this time, when the whole nation is alive to the danger of decreased production, and just when the public is learning that farmers are not receiving enough to pay competing wages, it is little less than criminal to try to turn public opinion against fairer prices to farmers. We are not prepared to say whether city papers do this to curry favor with city consumers who form the major portion of their patrons, or whether it is pure and simple ignorance concerning the fundamental economics of food production and distribution. One thing we do know and that is that not a single Philadelphia paper or politician gave any persistent backing to the movement a couple of years ago to improve the archaic marketing conditions in the city.

Farmers Institute

SO FAR we have heard little expression from the real farming population in Pennsylvania about the proposed change in holding farmers' institutes. The Secretary of Agriculture has suggested certain changes, but leaves the question largely with local communities for decision as to the kind of institute wanted. There is li doubt from the sentiments expressed to us b what most farmers believe that meetings of th character should pertain to questions of the co munity in which the meeting is held and th speakers should understand those questions an be able to give specific information. Generalit are no longer appreciated. The best farm meetings the writer has attended the past y were meetings held to consider special subjects some of them right out in the field where th eye as well as the ear was an avenue of instruc tion. If you have any definite opinion as to the kind of institutes which should be held during next season let us hear them. We are sure Secretary Rasmussen is anxious to have the hones opinion of interested people.

Our Washington Letter

Many states have laws covering agricultur lime. No two agree, however. One requires guarantee of lime content in terms of carbona another in magnesium as well as calcium. So refer only to burnt lime and others differ i various ways, causing the dealers much troub and confusing the farmer.

To remedy this situation Professor Elmer Fippin, manager of the agricultural departme of the National Lime Association, with headqua ters in Washington, has drafted a uniform agri cultural lime inspection law for enactment b State legislatures. This proposed measure is li ited to liming materials suitable for sweeteni the soil and does not include land plaster, whi has no capacity to sweeten the soil, its primar function being to supply certain nutrients, ther by putting it in a class with fertilizers.

Under the provisions of this bill every deal in agricultural lime in the State would be requir to secure an annual license covering each bra or kind of liming material he handles, and ea applicant for a license would be compelled t present a certified guarantee as to the chemi and physical composition of the material handled. Each package, or car or vehicle in which bul lime is transported shall have delivered with it tag or label setting forth the guarantee as t chemical composition and mechanical finene with the brand and name of the manufacture. The chemical analysis is to be given in terms o the actual lime elements.

Professor Fippin says this proposed unifor agricultural lime inspection bill will be submitted to the lime producers and the agricultural co leges and experiment stations for sugestions an revisions, which will lead to the development of uniform law effetcive in providing uniform li inspection and labeling legislation acceptable t the legislatures of every State in the Union. Th will not only be of benefit to the lime manufacturers and dealers, but will enable the farmers t secure an intelligent understanding of the kin and comparative value of the lime he purchase for use on his land.

* * *

Acting upon the suggestion of President Charles Warner, of the National Lime Association in regard to the need for local storage houses fo agricultural lime, Professor Fippin is working o a plan for a lime storsge plant for local distribution that will be inexpensive and serviceable. The Ohio experiment station has been working alon the same line, but Professor Fippin does not consider their plan as presented in the blue-print a practicable for the purpose intended.

* * *

It is evident that the oleomargarine manufacturers are making preparations to secure the removal of the tax on colored oleomargarine during the next session of Congress. They are promoti a widespread propaganda in which they are attempting to show that the tax is an increase of 25 to 30 percent to the con3sumer, and is a hardship upon the people. Figures compiled by the Bureau of Markets show that the production of colored oleomargarine increased from 8,000,000 pounds in 1918 to over 20,000,000 pounds in 1919, which they claim indicates that there is a demand on the part of the people for colored oleomargarine The total production of oleomargarine in the United States has increased from 143,157,23 pounds in 1912-13 to 348,975,925 in 1918-19, according to the Commissioner of Internal Revenue. Unless dairy farmers use some timely discretion in regard to the men they select to represent them in Congress and are organized for a systematic wisely directed campaign in opposition to the oleomargarine interests at the beginning of the session of Congress in December, they will very likely be unable to prevent the enactment of an amendment to the oleomargarine law removing the tax on colored oleo.

* * *

The Bureau of Public Roads, United States Department of Agriculture, has prepared a summary in which it is shown that 2885 projects have been filed with the Bureau, of which 2790 have been approved. These represent 27,79 miles of road improvement. Plans, specifications and estimates of 1800 projects have been recommended for approval by the Bureau, representing 14,000 miles of roads.

* * *

Figures compiled by Andrew P. Anderson highway engineer of the Bureau of Public Roads

show that there were 7,565,446 motor vehicles of all types registered in the United States during 1918, an increase of 23 percent over the previous year. As the total road mileage in the United States, outside incorporated towns and cities, is 2,475,000 miles, it will be seen that there are three motor vehicles for every mile of highway.

* * *

Some time ago the express companies asked the Interstate Commerce Commission to allow them to increase their rates 25 percent. Now since their employes have made a demand for a $73,000,000 salary raise the express companies are asking for a 15 percent advance on top of their former request, which if granted would tax the American public another $100,000,000.

The coming retirement of Major William A. King on August 20th, at the age of 88 years, will remove from the U. S. Department of Agriculture one of its oldest employes. Major King was appointed chief of the seed testing division thirty-one years ago and has long been in the library of the Crop Reporting Service. He is a native of western New York. Before coming to the Department of Agriculture he was the editor of "Colmans' Rural World."

* * *

The American Farm Bureau Federation Washington office is calling attention to the War Department's sensational advertising campaign to sell its surplus stock of meats. One large display advertisement, which is typical of the others, begins as follows:

"Government acts to lower liivng costs. The Secretary of War orders immediate release and sale to the American public of all meats declared surplus at extremely low prices. By the immediate disposal of its entire surplus stock of canned meats at the extremely low prices at which they will be sold, the Government delivers a powerful blow at the high cost of living. * * * Every available outlet will be used in distributing these meats. Every retailer, from the smallest to the largest, will perform a duty he rightfully owes to every citizen in his community by acting as a medium through which these meats will be distributed at the very low prices at which they can be sold. These goods are not to be offered for export. This decision of the Secretary of War to distribute them through every possible channel is made in order that the American people may benefit directly by the extremely low prices at which these meats will be sold. Because of the wide publicity to be given to the prices at which the Government will sell these meats, the American people will at once recognize and appreciate the spirit of co-operation to lower the living costs rendered by every retailer who participates in the distribution of these commodities."

This surplus of meats offered by the War Department for sale amounts to around 78,000,000 pounds of beef and 50,000,000 pounds of bacon, all in tins. It is being sold at a loss, but at the highest wholesale market price, it is claimed, the Department can get. 'The meat should be sold. It would be a crime to let it spoil. And the Government needs the money it will bring; but it is apparent that the Government, instead of making the disposal of the meat its main object at this time, is more largely interested in breaking the price of meats and thereby lowering food costs to the consumers in the cities.

Compared with the enormous annual consumption of meats in the United States, this 75,000,000 pounds of beef is less than a half week's supply and it could all be sold within a few weeks without injury to any industry, but the Farm Bureau Federation men look upon this attempt to break prices as a bad policy, which, while giving the consumers lower prices for a time, will have a psychological effect upon the market that will be disastrous to the cattle raising industry and the farmers will be the losers.

When this phase of the matter, the effect of this low price advertising campaign upon the cattle raisers, was pointed out to the War Department officials having in charge the sale of the meats, they assumed the attitude that as the farmers have already made so much out of the war they could well afford to stand the loss which this big Government drive against meat prices might cause them. It is only in line, however, with the policy of the administration to cut the cost of living for the city consumers regardless of its effect upon the farmers.—Elmer E. Reynolds.

NEW JERSEY NEWS

Tractors Popular.—That tractors are supplanting horses on the farms of New Jersey, particularly in some sections in the southern part of the State, has been reported to quite an extent since the opening of spring. It is very evident at the present time that there is a real demand for this form of farm machinery. A Michigan corporation has filed a certificate in the office of the Secretary of State to operate in New Jersey from Trenton. The principal object of the concern is to manufacture and deal in tractors and other agricultural machinery.

Field Meeting.—What promises to be the most important farmers' meeting ever held in Hunterdon County has been arranged for the re-organized Hunterdon County Board of Agriculture for Saturday, August 14th, at the Wayside Farm owned by Frank H. Welch, one mile east of Lebanon on the new State highway. The program of the day will consist of inspection of peach orchards on the farm, when discussion will be held on pruning, spraying and cultural methods; inspection of alfalfa fields and consideration of such subjects as good seed and liming; a talk on peach growing in New Jersey by Prof. A. J. Farley, acting horticulturist at the State Experiment Station at New Brunswick; an address on "The Method of Hearty Co-operation Among Farmers," by Prof. Alva Agee, of the New Jersey State Department of Agriculture; a talk on "The American Farm Bureau Federation," by H. E. Taylor, president of the State Federation of County Boards of Agriculture, and inspection of dairy herd.

Gipsy Moth Arrives.—Inspectors of the State Department of Agriculture have discovered infestations of gipsy moth on the Duke Estate in the vicinity of Somerville, Somerset County. Thousands of caterpillars were present and complete defoliation had occurred over several acres planted to blue spruces. Through co-operation of A. F. Burgess, Federal agent in charge of moth work, trained scouts were assigned to the infested area and they located small infestations outside of the estate at such places as Somerville, Manville, Millstone and Bound Brook. Further scouting will undoubtedly reveal additional infestations. It is said that the pest is spread mostly in the caterpillar stage; that the young ones drop down on fine threads and may alight on vehicles, which animals while they are invading cultivated ground. Operation of the law is being watched throughout the State with a great degree of interest, particularly by farmers and hunters. Several years of discussion of alleged damage to crops by deer preceded the adoption of the statute. More than sixty percent of the hunters in the New Jersey counties where wild deer are found carry them to non-infested districts; that they are also blown long distances by the wind; that irregular oval, yellowish masses of eggs are laid by the female moths in July and that these hatch about the first week of May and yield swarms of caterpillars. Another source of danger is said to arise from the fact that nursery stock shipped by the Duke Estate to points in and outside of New Jersey might have carried the egg masses to various places and that a small infestation recently discovered at Deal was traced to blue spruce trees originating on the estate.

Deer-Killing Law.—Where wild deer are actually destructive to crops in New Jersey a new law permits any aggrieved farmer to shoot the are farmers. Many of them have admitted that the animals trespass on the farms but do little damage, but there have been some cases where the damage done is said to have been serious to individual farmers. It is the general experience of official investigators, however, that the reports of damage have been much exaggerated. Quite a number of farmers have declared that where real damage is done the new law offers a certain remedy. They have pointed out that any attempt of unscrupulous persons to take undue advantage of the provisions of the act will immediately raise a question as to the integrity of those who sought its enactment; hence, all farmers and hunters are on the alert in the State to see that the requirements of the new law are fully complied with.

—Kelly, July 31.

NEW YORK LETTER

Farmers at Convention.—A large delegation of representative farmers was present last week at the unofficial Republican convention at Saratoga Springs. They have three demands which the Party will incorporate in its platform—repeal of daylight saving, effectual protection of farmers' co-operative organizations and an endorsement of the farmers' planks accepted by the National convention. The demands are all conceded to mean no direct profit to farmers, but a direct benefit to consumers and to have a stabilizing influence on agriculture. The same demands will be made of the other convention when held later.

New Milk Station.—The Netherland Dairy Company will open a new receiving station at Phoenix, with a capacity of 200 cans a day. Fulton dairymen are without a market and this company will open a plant there and at Metcalf. This company may yet merge with the Sheffield Farms Company.

Largest Tree.—The State College of Forestry is trying to locate the largest trees in the State and is offering prizes for news of the largest.

Blight Threatens Potatoes.—Farm bureaus are reporting the ravages of blight and are urging farmers who have not insured potatoes by spraying with home-made Bordeaux mixture, a 5-5-50 solution, to do so at once. Heat and warm days are furnishing ideal conditions. The crop is regarded as costing about $100 an acre so far. The crop is 4 percent shorter than last year on a national average and there is great need of taking care of it.

To Aid Fruit Raisers.—With a bigger peach and apple crop than before in years, and a shortage of refrigerator cars, the New York State Federation of Farm Bureaus, thru its transportation and marketing committees, is trying to aid the growers and consumers by conferring with railroad officials, the Interstate Commerce Commissions, also the Car Service Commission. The wages of fruit pickers was considered and 25 cents a barrel for apple pickers, who could thus average $5 a day, was deemed sufficient.

Heads Drive.—Herkimer County leads in the G. L. F. Exchange Drive, having exceeded its quota by $6000. It will receive the first local distributing stores and other counties will also receive these in the order of their subscriptions.

Crop Notes.—The acreage of potatoes in this State is reduced to 8 percent less than last year's and 4 percent in the entire country. Hay and oats are the only crops increased in area in this State this year. Corn acreages are reduced 6 percent, tobacco 12 percent, beans 10 percent and hops 4 percent. The condition of winter wheat, onions, beans and potatoes is 3 percent better than last year at this time. Hops are 100 percent in condition, or better than in seventeen years. Pastures are very short and hay is reported an 80 percent crop in fourteen counties, a 70 percent crop in fourteen counties, while some report a 50 percent crop. Cattle are very cheap as a result. Dairy cows freshening soon being offered as low as $65 each. The nation's hay crop is 6,000,000 tons shorter than last year's short crop and it is already having effect. Farms of the State in general need to practice a shorter rotation in hay. Where hay was new seeded or grown but two years the crop was this year good. But many fields have not been seeded in 5 to 10 years and these cut almost no hay this year.

Cow Testers Badly Needed.—Many cow testing associations that badly want the service will not get it this year because of a great scarcity of testers. About three to five times as many could be used.—M. G. F.

HARRISBURG LETTER

Support For a Weed Law.—Secretary of Agriculture Fred Rasmussen's stand in favor of a weed law that can be enforced and which would include such nuisances as wild mustard, chicory and the like, as well as the Canadian thistle, has brought him considerable correspondence, almost without exception in support. Farm conditions have caused the weeds to get headway in corners and along borders of fields, lack of attention on highways has permitted fringes, and carelessness in cities and towns has suffered some of the most troublesome of weeds to flourish. The Secretary is having prepared specimens of weeds, with brief descriptions of the harm they do, for a campaign of education, while he will seek advice throughout the State for drafting of a bill and an enforceable system. The only weed law now on the books, as previously stated in this letter, dates from 1885 and provides that if a landowner or tenant refuses to cut down thistles the constable shall do it and charge $2.50 a day, suing for it if the owner will not pay. Just how far such a law will go these days is worth noting. The Secretary will ask the supervisors of every township to have the weeds cut down as soon as possible and has renewed his warning against pernicious plants being allowed to go to seed. In some of the cities the Secretary has spurred the authorities into action.

Halting Big Trucks.—State policemen and highway inspectors have been crusading against truck drivers and owners whose big cars and heavy loads are ripping roads to pieces and scores of prosecutions have been made, while in numerous instances drivers have been forced to take off part of their loads and leave them along the highway. Trucking between the cities is growing very rapidly because of the railroad situation and violations of the law have reached what State officials frankly say is a dangerous stage for roads. Highway construction is costing so much that the preservation of the roads from the bad effects of heavily loaded trucks engaged in interurban work would seem to be good business.

Pushing Dog Law.—Agricultural Department agents have brought close to 1000 suits for failure to license dogs this year and most of them have been against farmers. The crusade in Bucks will be followed by moves in Indiana, Huntingdon and other central counties where complaints have been made.

State Aid to Fairs.—Notice has been given to the various agricultural exhibitions planning shows tihs year that the State has about $47,000 to distribute but that State aid will be confined strictly to products as defined by State law and that every product must be entered in competition in its respective class, while no credit will be given for exhibits of livestock or other products secured under contract and charged against the premium list. The Department will be firm on this latter provision and plans to send a representative to every show. An appeal to make the agricultural exhibits of greater value is made and it is to be hoped there will be more of the produce of their earth than of the vaudeville stage. The report is to be filed by November 15th.

Inspecting Milk Plants.—Inspections are now under way for the first time in about 550 creameries and milk plants to determine whether the results are in accord with the scale of payment. This inspection work, which has been undertaken throughout the State, is said to be producing some reports which will be sent to the Attorney-General for his official notice.

Apple Crop Down a Bit.—The June and July apple drop is reported now to have been more than expected, but the statisticians of the Department of Agriculture believe the showing on the new report will still be very gratifying. Nothing has occurred to disturb the predictions of excellent crops made ten days ago, say officials. The apple survey will be extended in August to Bedford, Westmoreland, Allegheny and other western counties.

The Potato Survey.—Experts of the Bureau of Plant Industry will conduct a study of the potato situation for the dual purpose of ascertaining whether the potatoes have suffered from diseases to any extent in the extensive planting operations undertaken in many counties and also whether any valuable seed potatoes are being developed.—Hamilton.

Get 'em out of bed
at the same time

WHEN you crawl into bed at night and it hasn't been made right, you don't get the refreshing repose you need.

It is the same way with seeds. Unless they are tucked in right, at just the proper depth, and the coverlet pulled over them, those that get up will start the day badly handicapped. Some won't get up at all. That will mean a real loss to your pocket.

There is a way to put the seed to bed so that every one with a spark of life in it will pop its head out from under the cover at the same time, to get its face washed by the rain.

A Hoosier, an Empire Jr. or a Kentucky Grain Drill will go further toward increasing crop yield than any other one element. You may not be increasing your acreage—you may have under cultivation every foot you own. These drills will do this for you—they will sow your grain at the proper depth and cover it evenly, and these facts are essential to bumper yields. They add bushels to the crop wherever used. Wheat, barley, flax, rye or other grains can be planted in exactly the proper quantity to suit your field and weather conditions.

No farm implement ever entered a farmer's service with a more uniform record of consistent performance than Hoosier, Empire Jr., and Kentucky.

Use the margin of this advertisement for sending us your name and address. Write on it, tear it off, send it. At the proper time the International dealer will show you the right drill. See him.

INTERNATIONAL HARVESTER COMPANY
OF AMERICA INC.
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Seed Wheat

Grow More Wheat per Acre! Sow the Right Variety!

"Hoffman's Seed Wheat"—11 kinds—hardy, prolific, reliable—yields well under trying weather conditions wherever sown. Is clean—free of cockle, garlic, chess, rye, smut. Write today for samples and free copy of "Hoffman's Wheat Book"—read descriptions of varieties—get the facts on wheat culture. Mention Pennsylvania Farmer

A. H. HOFFMAN, Inc., LANDISVILLE, LANCASTER COUNTY, PA.

Wheat and Clover

Some farmers continue to raise wheat at little or no profit, because a stand of clover can be secured in it if it is rightly fertilized. No crop responds better to POTASH FERTILIZATION than clover. For wheat to be seeded to clover insist on having a fertilizer containing 6 to 8 per cent of

REAL POTASH

and you will have a profitable clover crop, as well as a better wheat crop. In this as well as in other ways

Potash Pays

SOIL AND CROP SERVICE, POTASH SYNDICATE, H. A. HUSTON, Manager
42 Broadway New York

HORTICULTURE

THE APPLE MAGGOT AND CONTROL MEASURES

The apple maggot, known in some localities as the railroad worm, has during the past sixty years become a serious enemy of the apple in the Eastern States and Canada. The injury is caused by a whitish maggot, one-quarter inch or more in length, which burrows in all directions thru the fruit.

The parent flies appear in July and continue abundant well into September. The females do not begin egg-laying until two or three weeks after emergence. During this time they may be seen resting on the leaves or fruit and lapping up drops of moisture, or licking the surface of the waxy covering of the fruit with their fleshy proboscides.

They are blackish, two-winged flies with the head and legs yellowish; the abdomen has three or four traverse white bands and the wings are crossed by four dark confluent bands. The female is provided with a sharp ovipositor with which she punctures the skin of the apple, usually on the side, and inserts her minute, whitish, elongate egg directly in the pulp of the apple. The eggs hatch in from two to six days.

On hatching the young maggots start their tunnels thru the flesh but grow very slowly until the fruit begins to ripen or soften from decay. When this occurs the maggots grow rapidly and by their winding burrows soon reduce the interior to a brownish sponge-like mass. When full grown the larva escapes thru a ragged opening in the skin of the fruit, usually after it has fallen, and then as a rule burrows an inch or so into the soil, where it hibernates in a brownish puparium, having the appearance of a kernel of wheat.

It is impossible to kill the maggots with any poison or contact spray because the eggs are inserted directly into the pulp beneath the skin of the fruit and because they do not leave the apple until full-grown. The flies, however, can be readily destroyed by having the fruit and leaves covered with an arsenate of lead spray at the time of their emergence in early July. For two or three weeks after emergence the flies feed on the waxy covering of the fruit and lap up moisture from the fruit and foliage. Experiments in New York have shown if the trees are sprayed the first week in July, before feeding begins, with arsenate of lead, 4 pounds in 100 gallons of water, most of the flies will be killed. When orchards are well cultivated, so as to give a minimum of protection to the puparia thru the winter, and when a good system of spraying is practiced, the apple maggot is not serious.

APPLE BARRELS SCARCE AND HIGH

Apple growers in western New York are being warned to order their supply of barrels while there is some chance of getting orders filled. The situation is uncertain. Few apples will be packed in barrels before September, yet the fact remains that there is by no means enough barrels in sight to meet demands.

The Girl Has the Right Idea—Don't Pick Fruit Into a Bag

Weather conditions in the Southwest, where the bulk of the cooperage stock used in the Western New York fruit belt is produced, has greatly hindered. Further, the price of lumber is higher than ever before and logs that might have gone into cooperage have been used in other lines. The congested condition of the railroads aggravates the situation.

Inquiry among cooper shops of the district indicate that even now coopers are generally accepting orders only in a limited way. Many shops have sold close to their output for early fall delivery unless they can get more stock to work up.

Apple barrels, standard size, are now regularly quoted at $1.50 each, with some sales made at $1.55. This means an addition of slightly more than 50 cents a bushel to the price of all apples handled in barrels. Time was not so many years ago that apple barrels sold regularly at around 25 cents. The price this year is more than twice the average price in 1919, when many of the barrels used in the fruit belt were bought at 65 cents. In the case of a barrel of apples selling at $6, it means that 25 per cent of the cost must be charged up to the ackage.

With a barrel shortage in sight it is a good guess that many apples will be handled in bulk, but there is a limit to the amount of this business, because apples for winter use must be packed. Undoubtedly there will be more baskets, principally bushels, used than in average years, but here again there is a shortage, with prices rising to new levels that add materially to the cost of apples to the consuming public.—Alvah H. Pulver, Wayne Co., N. Y.

SAVE TOMATO SEED

No sane dairyman would attempt to build up a profitable herd with a scrub bull. No sane tomato grower ought to expect a big profitable yield of tomatoes by using scrub seed. There is as much good sound sense in using good, reliable pedigreed or certified seed in growing tomatoes as there is in using a good pedigreed bull in improving a herd. Every tomato grower who expects to add to his income thru growing tomatoes should be just as careful in selecting his tomato seed as he would be in selecting the head of his herd. Tomato growers should select their seed stock and save their own seed. Delaware cannot hope to preserve her tomato industry unless her growers stop using "cannery run" tomato seed. Cheap priced tomato seed will prove in the end to be the most expensive seed. Poor seed means poor plants, weak plants, non-productive plants, unreliable plants, mixed types of fruit and low yields. Can the tomato growers of Delaware afford to use cheap seed for their tomato crop? They can not. The salvation of Delaware's tomato industry lies in larger tonnage per acre. One cannot find that brand of salvation in a package of cheap "cannery run" seed.

POTATO WART DISEASE ATTACKS TOMATO PLANT

The potato wart disease, imported from Europe to Pennsylvania two years ago, has been found to attack the tomato plant in the infected districts of Pennsylvania, thru the investigations carried on since its discovery. Small galls are to be found clinging to the roots of tomato plants growing in soil that has produced warty potatoes, but so far as now known, the disease produces no further injury to the plant and does not affect the fruit of the tomato. Specialists from the Pennsylvania State College continued their investigation of the wart disease at Freeland with renewed efforts this spring, in co-operation with the U. S. Department of Agriculture. All of the usual truck and farm crops have been tried on the infected soil, but the tomato is the only plant attacked.

It has been found that seventeen of the sixty-three American varieties of potato grown at the Freeland laboratory are immune from the disease. More native varieties are being tested this year. Parts of seven Pennsylvania counties are infected with the disease, and quarantines have been placed in a number of towns and districts in Luzerne, Carbon, Schuylkill, Lackawanna, Cambria, Centre and Clearfield. Only immune varieties may be planted in these districts.

The ultimate solution of the wart problem in America lies in eradication. Quarantines and immune varieties are undesirable necessities. Thus far it has been proved that steam sterilization of the infected soil will kill the disease, as will also steam and formaldehyde combined.

Quality oils last longer so it's easy to tell them

Lubricants are used to overcome heat—but they never wholly succeed.

They use themselves up in the effort, for slowly but surely champion heat breaks them down into useless carbon.

A good oil, like a good fighter, will last longer against the champion than a poor one—and that is the one sure test of its quality.

Note the mileage you get from your next oil-filling—then test Crew Levick lubricants the same way, and see for yourself whether our long standing claim for quality is justified.

Don't be surprised by the comparison, for the difference in some lubricants on this score is really startling. Wherever you see the Crew Levick trade-mark you can buy these Crew Levick products

Motor Oil
Special Gear Compound
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PROMPT SHIPMENT
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Save the Corn by putting it in a "Tecktonius" Silo

A late season like this causes the loss of many thousand of dollars in immature corn If you do not have a silo, order a Tecktonius or Darby from us today.

The need is now. Save the corn.

We have all sizes in stock and can make prompt shipment if ordered now.

Tecktonius Silos, like the one in the picture, from 20 to 40 feet of one piece Douglas Fir staves, or with spliced staves for less and the Darby for still less money.

They will not be cheaper.

Write today for descriptive booklet and prices.

G. Woolford Wood Tank Mfg. Co. 710 Lincoln Bldg., Phila., Pa.

Make The Thermometer Rise on Cold Days With an Empire Pipeless Furnace

They are made for houses large and small and are backed by a reputaton of over 50 years of stove and furnace making. The RED CROSS EMPIRE is an efficient heating unit, made of the best material and workmanship. To secure a comfortable, healthy heated home the coming winter, write us now for name of our dealer located nearest you and plan in advance for installing a RED CROSS EMPIRE.

Co-Operative Foundry Company
Rochester, N. Y.

Manufacturers of the Celebrated line of
Red Cross Stoves and Ranges and Bermuda, Ajax,
Empire and Empire Pipeless Furnaces

Put One in Each Nest Keeps Lice Away

A lot of valuable feed that ought to make eggs is wasted in feeding lice. Many a hen is a "boarder" because lice are "boarding" with her. You can't have happy, clucking, rosy combed, egg-laying hens, when lice and mites drain their vitality—take blood away from the egg-producing organs.

Keep your hens free from lice by putting in each nest a

Knox Nest Egg

Contains a powerful disinfectant that literally drives vermin and lice out of nests. Simply place under the nesting materials. Helps all to lay more eggs, from the most frivilous young pullets to the most dignified old [illegible].

Price, by express, 70c. a dozen. Postpaid, 80c. a dozen. If your dealer cannot supply you, accept no substitute. Order direct from us.

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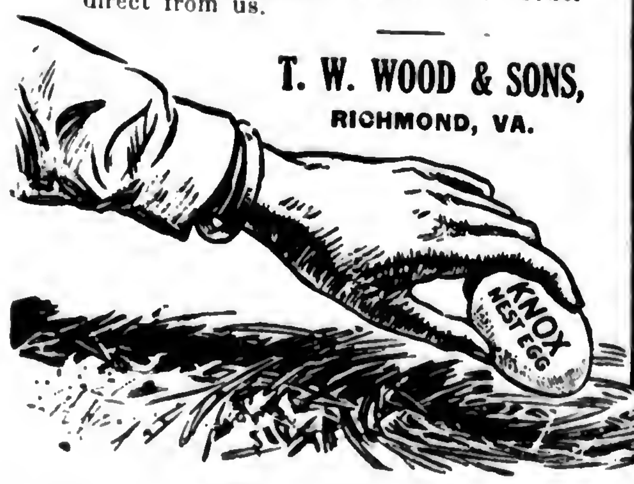

POULTRY

AUGUST POULTRY HINTS

Band the old hens before the pullets become much older. Now it will be easy to tell them apart and next year there will be no danger of selling pullets and keeping old hens that are about through with profitable egg production. The colored spiral bands are suitable for farm flocks where the birds are not trapnested. They can be removed from old hens when they are marketed and used indefinately to mark other hens.

* * *

A storage shed is rather necessary for the brood cops. It costs money in time and material to make them and their life is reduced if they are left throughout the winter in the snow and rain. An empty colony house can often be used to properly store the small coops.

* * *

As the growing stock become larger it becomes more necessary to lock the colony houses each night to avoid losses. Know the number of birds in each house and occasionally check them over. This enables the poultryman to soon tell if thieves or other pests are making inroads on the flock. A good watch dog, properly chained in the vicinity of the houses, will often earn his board for several years by frightening away poultry thieves.

Sunflower seed helps in the fall ration of the hens. When the seed is ripe it pays to harvest them or break down the stalks so the hens can scratch them out. This prevents wild birds from gathering the bulk of the seed. The large Russian sunflowers make a dense shade that is a fine protection from hawks and hot sun and wind. Save enough seed to make a large planting next year and save it from the best of the large heads which have produced a good crop of plump seed.

* * *

One poultryman has figured that it takes a hundred eggs to feed a hen one year. Here is the interesting point. This means that the 100-egg hen returns no profit. The 120-egg hen will enable a man to stay with the business. A 140-egg hen is as good as two that lay 120. A 200-egg hen is worth five hens that lay 120 eggs. Of course the high producer also means more chances to sell her hatching eggs at high prices. It surely pays to cull and cut out the hens that lay 100 eggs or less and either must pay their board or sponge on the cash earned by the good hens.

* * *

I once heard a man speak of the "mysterious power" of a poultryman who seemed very skilled at culling poultry. This man did not feel capable of doing any culling for himself. But a careful reading of the many culling articles published will convince a poultryman that culling is a business based on a few scientific truths found by the study of good laying hens. The facts that have been determined have been proven true. Culling simply means selecting the hens with capacity for egg production and discarding the birds lacking that capacity. Some poultrymen can cull better than others but all can learn and practice the art with great profit to themselves.

* * *

When a hen becomes lame and emaciated she should be killed and a post-mortem examination made to see if there are greyish-white nodules on the liver. Such a condition nearly always indicates that the bird is tubercular. The disease is contagious and not subject to treatment. The carcass should be burned rather than buried where it may be scratched up by dogs. No trifling with tuberculosis is safe. Trying to treat a case while the bird runs with the flock might infect all of the birds and cause a severe loss.—R. G. Kirby.

(To be Continued Next Week.)

GAPES

A number of remedies for gapes have been received as a result of a short article in "Pennsylvania Farmer" a few weeks ago. One reader writes:

"Stir into the mixed feed a tablespoonful of wood ashes for about twelve chicks, or about one teaspoonful of soda for the same number." She says she knows this to have been successful for forty years.

Another advises keeping the chicks shut up each morning until the dew is dried off. She has followed this practice successfully for several years.

Many other panaceas have been offered. Some writers express a willingness to part with their secret for a compensation. It may as well be understood that so far as is known there is no sure and satisfactory cure for gapes when once devedoped. The remedy lies in prevention. Ground that has been polluted in previous seasons is almost sure to reproduce it in chicks the following season if they are permitted to run over the same ground the following years. This is especially true if allowed free range in the early morning and when the ground is wet. The fact that earth worms come to the surface at such times partially explains this, because it is known that the germs or newly hatched gape worms attach themselves to the sides of earth worms.

The safest course is to keep the chicks on a board floor or to place them on ground far away from the previous runs until the chicks are well grown and able to overcome the curse. In the meantime it is possible to clean up the old grounds by plowing or spading deeply and giving a heavy coating of lime. Again we repeat, "an ounce of prevention is worth a ton of cure."

EARLY MOLTERS—LONG VACATIONERS

Hens which molt early take the longest vacations, while late molters start to lay the earliest in the spring and lay the most. The best hens molt late. The number of new feathers on the wings furnish a reasonably accurate estimate of the length of a hen's vacation, the hen men claim. Molting follows the stopping of laying; it does not cause it.

Be as careful of fire as you are of powder; it is just as dangerous.

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'Your Goodyear Cord Tires on our truck go right through the plowed ground of our citrus groves, permitting loading at the trees, and they protect the fruit, particularly the lemons which are very delicate, by smoothing the haul to the packing house. They save labor, fruit, time."—H. J. Kelly, Packing House Manager, Charles C. Chapman Ranch, Fullerton, Cal.

IN rural hauling like this and in farm duty radically different, the use of Goodyear Cord Tires on trucks has been found productive of a variety of important advantages.

Their traction has increased truck utility for farmers, ranchmen, fruitgrowers, dairymen and others, particularly owners of motorized farms, by enabling easy hauling through soft fields.

Their cushioning has effected continuous savings in the marketing of delicate vegetables, fruit, dairy products and of eggs and livestock, all of which suffer on slow, jarring solid tires.

Their nimbleness often has accomplished more hauling with less driving and resulted in a quicker feeding of power machinery while releasing hands and saving time for farm work.

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GOODYEAR
CORD TIRES

HOME BUREAU BOOTH AT FAIR

An Interesting and Helpful Exhibit

I want to tell you about the home bureau exhibit we women of Broome Co., N. Y., had at our county fair last fall. I was in attendance at the booth for three of the four days of the fair and the greatness of the work as represented by the exhibits from the different groups of women from over our county astonished me, as it did everyone who saw the show.

The first thing that caught my fancy was the row of canned meats, possibly because I had not canned much meat and probably because I immediately saw its utility—we live eleven miles from a meat market. Then other canned goods drew my admiring attention—perfect specimens of the housewife's art. The pink and white slices of ham, the beef with its accompaniment of rich juice for gravy, all vied with the canned vegetables. All the meats were very perfect in appearance and all had been canned by the pressure canner process, as had most of the vegetables and fruits.

Canned fruit juices of various kinds were there—grape juice of many shades, peach, pear and currant juices, some of them the rich fruit—flavored syrups left over from canning, canned and thus saved for making ice cream sundaes, sauces for puddings, fruit beverages—it just made one's mouth water.

The men and women who came to look at our exhibits had many questions to ask about them. Such reams of Government and State bulletins as we gave out at their request! And we took down rows of names and addresses of those who asked for bulletins that we could not show them that day. Several men asked us just how to make the fireless cooker that we had on exhibit. Many wanted to learn all about the pressure canner that we also had there to show what the women canned that meat in. And they were pleased to learn that home bureau members could get 20 percent reduction on these canners. I talked iceless refrigerator until I was hoarse—ice was very scarce and high in our locality last summer.

And by no means was the giving of information a one-sided affair. Many women who came to inquire gave us original ideas, so our booth was a constant mutual benefit gathering place during the fair.

One man, who said he had a bumper crop of potatoes, remarked: "Why is it you women who put up every kind of food don't can new potatoes?"

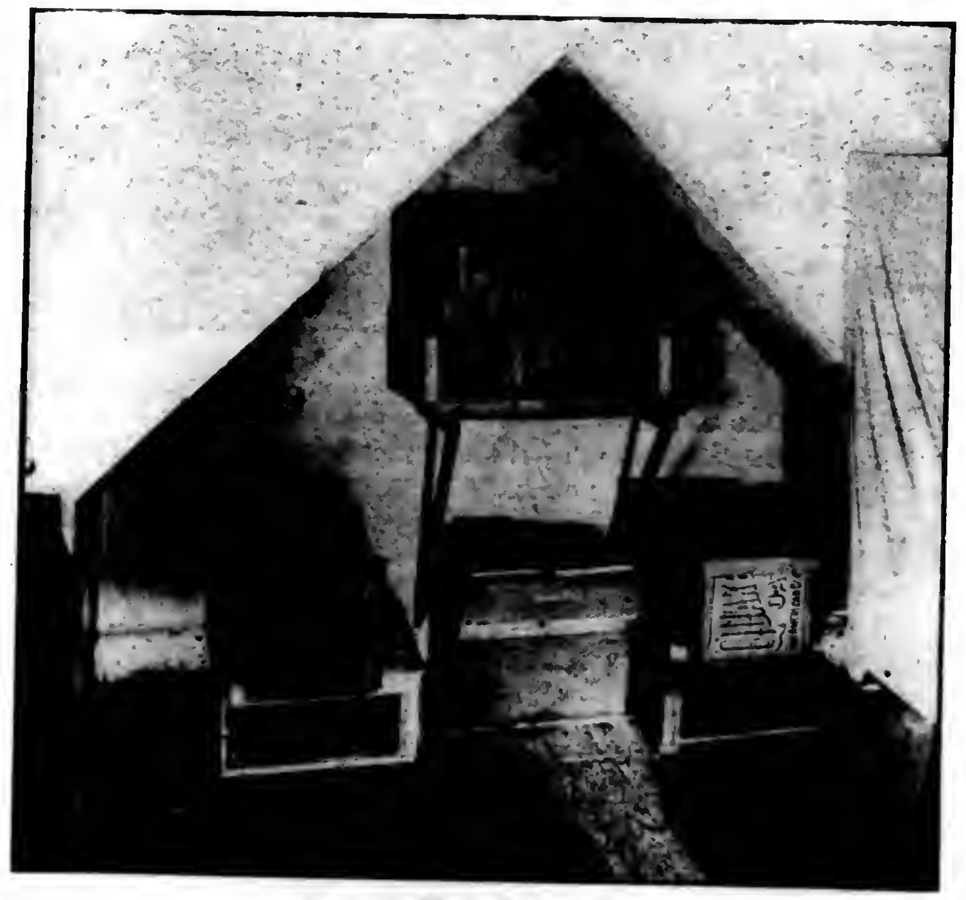
The reply came quickly from a woman from my home town: "We have, and they will be here tomorrow."

Some Unique Canned Goods

They arrived and my home town won the prize for having the most original exhibit, altho it was small. We made up in originality what we might have shown in quantity. Among our canned products we showed lettuce soup, salt pork and endive canned like dandelion greens, all ready for table use, the new potatoes above mentioned, and concentrated tongue broth made of the liquid in which beef tongues had been boiled, this broth having been seasoned with celery and given "body" by cooking a little rice in it. This tongue liquid is too often thrown away. We also had apple conserve made of the despised Ben Davis apple. We let it be sampled and it was pronounced both delicious and eye-pleasing. Strawberries canned raw were not new to some housekeepers, but many had never tried them. Three specials of our showing were potato candy and frosting (almost everyone wanted to learn how to make this), cucumber lotion and and album of furniture and textile conservation illustrations.

The cucumber lotion for whitening and softening the hands excited much interest. This was partly made from the cucumber juice usually thrown away when making raw chopped pickles. The raw pickle came in for its share of popular interest also.

Topping our exhibit was the album aforementioned. It included a photo of a girl's cap and scarf evolved from grandfather's muffler of years gone by (this was illustrated and described in January 24, 1920, "Pennsylvania Farmer"), a one-piece dress made from a suit, another made from an old silk coat and a wool skirt, capes made from old coats, hats made of everything from a dyed georgette waist to upholstery samples, this last corded with a piece of clothesline. Women and girls wore some of these garments right in the booth and every one of them was attractive and up-to-the-minute looking.



An Attic Nook Put to Use

The furniture conservation exhibit included a girl's dainty dressing table (this was illustrated and described in "Pennsylvania Farmer" November 15, 1919), portiers made of beads constructed of wall-paper, an old high-top bedstead cut down to a good resemblance of nowaday styles—all the above and more good makeshifts we had the privilege of demonstrating to inquirers by means of the photographs of the actual articles, before and after remodeling. The remodelers' addresses were also in the album and as these were women known to many the photographic display was thoroly convincing.

We told a woman who goes to Florida every winter how to use the dry, gray moss that clings to the live oak trees down there for packing a fireless cooker for her Florida use. And one woman who had used her fireless in every way imaginable told her how to freeze ice cream in a fireless cooker.

Thus we obtained and we gave much good housewifely and home bureauly advice. And it paid. We all feel sure of that.

One of the most serviceable parts of our work was our rest tent, where mothers brought their babies for the necessary care and privacy, where grimy little hands were washed, where mothers with children too small to be taken about the fair grounds left their babies in the expert care of trained nurses, each baby tagged for reclaiming by its grateful parents, who could then go a-fairing with the assurance that baby would sleep or play watched over quite as efficiently as at home.

At our booth and tent many mothers availed themselves of the expert advice which we provided regarding the care and feeding of little ones. Many babies were weighed, examined as to their health and individual needs and some helpful suggestions were given the mothers. While our men of the farm bureau are looking after the outside interests of the farm home we are right inside that home looking after its hearts. In every county of our State the home bureau is becoming a vital center.—Mrs. Nina Wallace.

(Is your home bureau preparing such a useful exhibit for your fair this fall? Or haven't you any home bureau yet? Better get busy.—Editor).

PREVENT DARKENING OF PEELED FRUIT

Apples, peaches, pears and other fruits may be prevented from turning dark if they are to stand a short time after being peeled by putting into cold water. If they are to stand some time the addition of a teaspoon of salt to a gallon of the cold water will prevent their changing color. Or lemon juice or vinegar may be used instead of salt; use tablespoonful to a quart of water.

Banana can be kept white a long time if dipped in lemon juice. The lemon helps the flavor of the banana, in the opinion of many persons.

When these fruits are to be made into salads cover them with a coating of the dressing as fast as they are peeled and they will stay white a long time.

When nuts like English walnuts stand in fruit salads they give them a purplish gray color. This may be prevented by mixing the nuts with the rest of the salad just before it is served. The salad will also have a finer flavor if this is done, because when they change color they also give the salad a peculiar bitter flavor. There seem to be no bad results from eating salads containing nuts which have changed color, nor of eating fruit which has turned dark, but in neither case is the flavor equal to that with the clear bright natural color of the freshly peeled fruit.

—Edith Allen.

NEW YORK HOME BUREAU NEWS

New State Leader

July 1st Mrs Ruby Green Smith assumed her work as the new head of the home bureau work in New York State. Mrs. Smith is the wife of the head of the engineering college of Cornell University and is herself a graduate of Leland Stanford University, Cal. Since coming to Ithaca she has made herself very useful to the community, among her enterprises being the conduct of an open market for turkeys one Thanksgiving where 1800 fresh-killed turkeys were sold for reasonable prices to the consumers and profitable prices to the farmers as against the cold storage birds held for exorbitant prices.

Community Dressmaking Group

At Mattituck, Suffolk Co., under direction of the home agent a group of home-makers arranged to meet once a week at the church for instruction by a professional dressmaker in cutting, fitting and making the dresses for themselves and children. They have been enjoying these weekly conferences and have received a great deal of valuable help. They are taking a vacation thru July and August but plan to resume their meetings in the fall. They urge women in other communities to realize what a useful arrangement this is and to go and do likewise. A similar group has been meeting at Eastport, the same county. These two groups are arranging an exhibit of their work for the home bureau booth at the county fairs this year. Millinery classes will be organized for homemakers this fall to take six lessons in making and making over hats for winter use. This is what home bureau service and co-operation is doing for farm women in Suffolk County. Let's hear what it is doing in your county.

CORN RELISH A DISH FAMILY WILL LIKE

The family which likes relishes will surely find to their taste corn relish, a recipe for which is given out by the home economics workers at Cornell. Here is the way to make it:

Take 1* dozen ears corn, 1 small cabbage, 1 bunch celery, 4 onions, 2 green peppers, 2 quarts vinegar, 2 cupfuls corn syrup, 1 cupful corn flour, ½ cupful salt, ½ teaspoonful mustard, ¼ teaspoonful cayenne, ½ teaspoonful tumeric.

Cut corn from cob. Force cabbage through a meat chopper. Separate celery stalks, remove leaves, and chop. Peel onions and cut in thin slices. Wipe peppers, and chop. Put vegetables in preserving kettle and pour over one-half of the vinegar. Mix syrup, flour, salt, mustard, cayenne and tumeric and add remaining vinegar. Combine mixtures, bring to boiling point and let simmer for forty minutes. Fill glass jars and seal.

LAXATIVES CHILDREN WILL LIKE—WHOLESOME, TOO

Why torment the little folks with castor oil or salts or even citrate of magnesia when pellets made of the following ingredients will accomplish the work of keeping their digestive tracts operating in good order and at the same time furnish good food value for their bodies.

No. 1

Stone ½ pound each of prunes, dates and raisins, crack ½ pound walnuts (either black walnuts from your own farm or the "boughten" English walnuts), add ½ pound figs and half of a 10-cent package of senna leaves and chop all together with the coarse cutter of the food grinder. Keep in a glass jar and let the child eat one teaspoonful or one tablespoonful after each meal and you will soon have the constipation habit conquered in a very pleasant way.

No. 2

Another good recipe is ½ pound each of figs and prunes, ¼ ounce ground ginger, ½ pint molasses, half of a 10-cent package of the senna leaves. Chop the figs, prunes and senna leaves in the food chopper, then mix thoroly with the ginger and the molasses. Put in a glass jar and give a teaspoonful or a tablespoonful after meals. Probably the children will not like this quite so well as the first, because it will be rather sickish, but those who have a real strong sweet tooth will like it all right.

How Long to Give This Remedy.—About a jelly glassful of either of the above recipes will straighten out the most obstinate case of constipation so that an ordinary diet of cereals, fresh vegetables and fruits will keep the system working all right.

Remedy They Can Eat Every Day

If you just leave out the senna leaves, which are the active agents in stimulating the action of the intestine, and merely use the fruit and nuts, you have a laxative that can be given regularly every day, morning and night with beneficial effect, for it is nourishing and is not too stimulating to the intestines.—H. M.

KEEPING APPLE AND GRAPE JUICES

Keeping Cider Sweet

"Please tell me the right amount of salicylic acid to put in a 50-gallon barrel of apple cider to keep it sweet. Should it be put in as cider is pressed out and should the cider be corked or bunged up tight at once "—C. E. L., New Jersey.

The very best way to keep cider sweet is to sterilize it just as for grape juice instead of putting "dope" in it to keep it from fermenting. If you destroy the ferment spores that cause the trouble your cider will not only taste better but you will also get the full benefit of the apple juice properties which help digestion. But if you put in salicylic acid you prevent fermentation; you are introducing a preservative which will not only arrest fermentation, but because it is a preservative will arrest digestion if the cider is taken in considerable quantities. So better not do it that way. Do it this way instead:

As soon as pressed out strain thru several thicknesses of cheesecloth and heat in enamelware kettles to not over 110 degrees, then let settle and strain again and put into jugs that have been sterilized by boiling for fifteen minutes submerged in the water. Then set the jugs in a big container with the water up to the jug necks and bring the temperature up to not over 165 degrees and keep it there 40 minutes, having the corks in very loosely. As soon as the cooking ends, drive the corks at once into the jugs and seal with melted paraffin. This will make juice that will keep for years and not have any flat or cooked taste. If it is inconvenient to handle jugs this way better bottle the cider, sterilizing it in a boiler of water with the water up to the bottle necks and the corks laid in loosely. Set both the jugs and the bottles, whichever you use, on a rack to raise them off the bottom of the boiler at least an inch so that they will not be in direct contact with the fire and also that the water may have a chance to circulate under the jugs and bottles the better to do the sterilizing.

Oh, the Joys of Childhood

Make grape juice the same way. You may press the juice from the uncooked grapes, strain, heat it at once to not over 110 degrees in an open enamelware kettle, let settle a few hours, then strain again; put in sterilized bottles, set in the boiler with water up to the bottle necks, bring to not over 165 degrees, and keep there for 40 minutes, then at once push in the corks and if necessary seal with melted paraffin.

Or you may heat the grapes first, then press out the juice, let settle a few hours, strain, bottle and proceed with the sterilizing as just indicated. It is not necessary to add sugar, for most varieties of grapes are sweet enough without. However, if you like a very rich juice add sugar in proportion of two cups per gallon of juice. However, since it is so difficult to get sugar this season probably you will rather not put it into the juice now but trust to its being more plentiful when you open the juice for use in the winter.

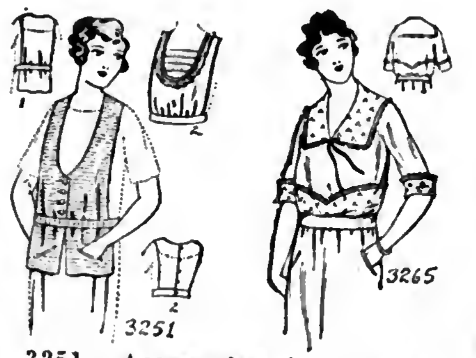
Another way to make grape juice and a very easy one is to wash thoroly some stemmed grapes, sterilize some big-mouthed jugs by boiling at least fifteen minutes submerged in boiling water bath, then put into the jugs the grape berries in proportion of two cups grapes to one quart of boiling water and seal up with sterilized corks and melted paraffin wax.

PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

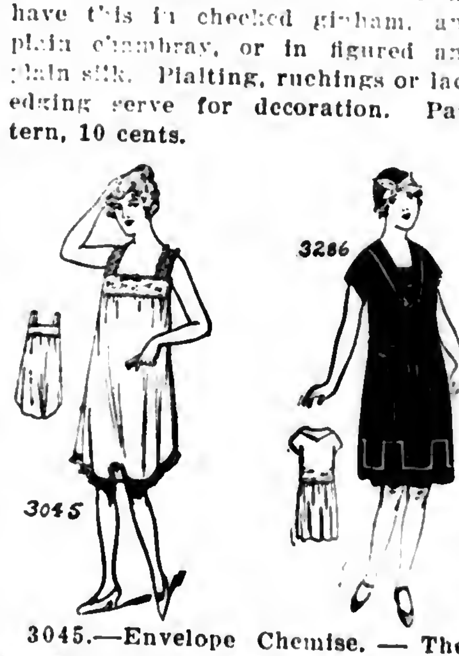
CATALOGUE NOTICE

Send 15 cents in silver for our up-to-date Fall and Winter 1920-1921 Catalogue, containing over 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking; also some points for the needle (illustrating thirty of the various, simple stitches) all valuable to the home dressmaker. Address "Pennsylvania Farmer," 261 South Third Street, Philadelphia, Pa.



3251.—Accessories for Dress or Coat.—The pattern is cut in 4 sizes: Small, medium, large and extra large. Medium size will require 3⅞ yards No. 1 of 27-inch material, and 1⅜ yards for No. 2. Satin, silk, linen, pique or crepe could be used for No. 1. For No. 2, lawn, batiste, mull, dotted swiss, dimity and organdie, chiffon and crepe de chine are desirable. Pattern, 10 cents.

3265.—A Popular Blouse.—The pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 2¼ yards of 27-inch material. As here portrayed, eyelet embroidery and plain voile are combined. One could have this in checked gingham, and plain chambray, or in figured and plain silk. Plaiting, ruchings or lace edging serve for decoration. Pattern, 10 cents.



3045.—Envelope Chemise. — The pattern is cut in 4 sizes: Small, 32-34; medium, 36-38; large, 40-42, and extra large, 44-46 inches bust measure. Size medium requires 2⅝ yards of 36-inch material. Pattern, 10 cents.

3286.—Bathing Suit.—The pattern is cut in 4 sizes: Small, 32-34; medium, 36-38; large 40-42; extra large, 44-46 inches bust measure. Medium size will require 3& yards of 36-inch material. Good materials are serge, tricolette, garbardine and alpaca. Braid or embroidery may be used for decoration. Pattern, 10c.

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There is a vast difference between *cut* silage and *macerated* silage. *Ross Ensilage* Cutters *cut* the corn. Each particle retains its juice. Thus the *entire food value goes into the silo.* Ordinary cutters chew and beat the corn, throwing only the pulp into the silo and allowing most of the juices to run out at the bottom of the machine.

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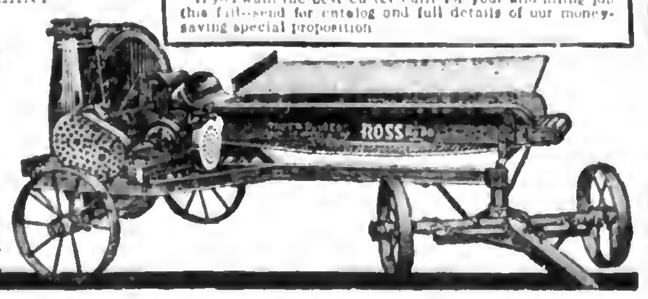
Distributing Houses in 21 Leading Shipping Points in the U.S.A.



DR. A. C. TRUE, ORGANIZER OF THE STATES RELATIONS SERVICE

Dr. A. C. True, of the States Relations Service, U. S. Department of Agriculture, was educated at Wesleyan University, graduating from that institution in 1873. He attended Harvard University from 1882 to 1884. His education was classical and scientific, tho it proved to be admirably adapted for the service he was to perform. His interest in agriculture came later when the establishment of agricultural experiment stations and the development of the land-grant colleges opened the door to professional training in agriculture. Doctor True's work, after he left college, was that of teaching, but he was soon called to Washington to organize and edit the "Experiment Station Record," which is now recognized as the most complete review of scientific investigation in agriculture in the world.

This was in 1889 and from that time on Doctor True's effort was directed toward organizing and establishing agricultural research on a sound scientific basis, putting agricultural subjects in pedagogical form—shaping the science of agriculture so that it could be more effectively taught in American colleges and schools—and making agriculture a recognized, honored and useful profession.

The States Relations Service has helped greatly to bring about the present system of agricultural experiment stations, which is "unsurpassed in the world for its efficiency and practical usefulness to agriculture."

It has been influential in putting the subject-matter of agriculture and home economics in teachable form for the use of agricultural colleges and lower schools.

It has helped the masses of farm people, who could not go to college, thru the educational extension work in agriculture and home economics carried out by the county agricultural agents, home demonstration agents, club leaders, specialists, farm bureaus and publications.

A widespread revival of the production and conservation, by canning and other means, of fruits and vegetables for home consumption is a notable achievement of the extension workers of the service.

To the inquiring person Doctor True will probably emphasize especially the contribution of the States Relations Service toward making the science of agriculture an accepted course in American educational institutions, but you will find many men high up in farming affairs who hold this accomplishment second to that of organizing and developing experiment station work under the Hatch and Adams acts, or the coöperative extension work in agriculture and home economics under the Smith-Lever Act.

The ideal of service to the farmer that is the motive power back of every project of the Department of Agriculture is expressed by the States Relations Service, mostly in terms of agricultural and home demonstration agents—"men and women county agents."

SOWING ALFALFA IN CORN

As alfalfa seems to be the great object now, in time of high cost of feed, and as it is ideal feed for almost all stock as well as a wonderful cropper, need we wonder at the enthusiasm over it?

It should be planted in time to make a good stand by the time winter sets in—say from July 15th to August 15th. Last year we tried sowing it broadcast with the seeder in the corn, just before the last harrowing and never had a better stand.

A ton of lime to the acre was applied when harrowing before planting the corn. We also used the glue method of inoculating the seed, which was as follows: Dissolve 2 ounces of glue in 1 quart of water; prepare about 2 quarts of dry, sifted dirt taken from a depth of 4 inches, where good sweet clover or alfalfa has recently grown. Sprinkle the quart of glue water over the bushel of alfalfa and while the seed is being stirred to distribute the moisture, sprinkle the 2 quarts of sifted dirt on the seed and stir well. Dry the seed and resack it ready to sow. The dirt, sprinkled over, should be dry and the seed should not be exposed to the sun in any way. Bacterial culture can be purchased, but the glue method is better.

It has been fully demonstrated that alfalfa cannot be successfully grown in these parts without applying lime and inoculating the seed.

Our alfalfa is cut in the morning after the dew is off. As soon as it wilts rake in wind rows for a few hours; put in cocks and let it cure a couple of days. Alfalfa must not be allowed to dry before raking as it will cause considerable loss of leaves in handling, which are three times as nutritious as the stems.

For pasture care should be taken in putting stock on, as there is great danger of bloating and too much pasture will injure the crop.

—M. A. Croll, Del. Co., Pa.

Crop estimates which are reliable and unbiased are important not only to agriculture but also to all those industries which depend upon agricultural products.

WHAT SOCIABILITY MEANS TO FARM PEOPLE

(Continued from Page One.)

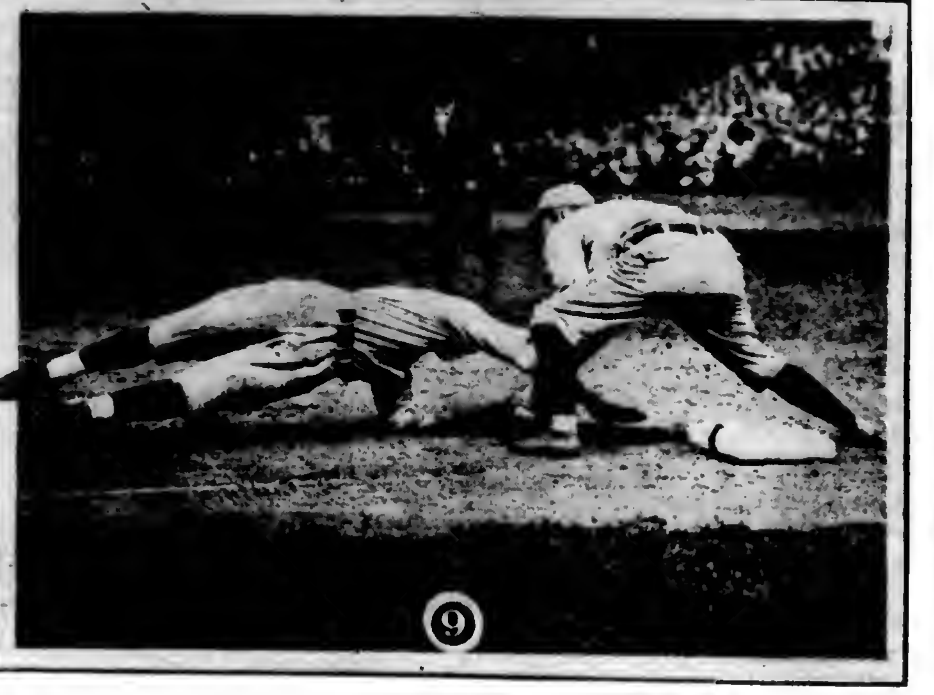
It should be easy to make these newcomers like their homes and their neighbors in a country like this, where everything but the sociability question is so really desirable. They like the conditions here, the climate, markets, roads, the country itself, or they would not have come here. Let us remember their isolation from old friends and associates and proceed to make them like the people of our communities. Be a friend. They are used to different methods of farming than we use. Show them why we do as we do. There must be real reasons and they need to know them. And don't let's forget that we may learn many things of them, possibly some facts about sociability and what it can do.

TRACTOR PAYS FOR ITSELF

(Continued from Page Two.)

sumed by the mules). My tractor today shows no wear and has as much power and "pep" as the first day I used it, and I think I am safe in saying that I have saved $1000 a year in labor hire, $500 or more in increased production (on acount of better tillage) and feed sold that would have been consumed $600 or more. I admit my farm is ideal for tractor work, as the fields are square and level, with no obstructions in them. How long will the tractor last? I can't see why it should not last eight or ten years, or longer. It does not owe me anything now, as I would be ahead of the game if I had to buy one every year.

PASSING EVENTS IN PICTURES



(Photos Copyright by Underwood & Underwood)

1—Miss Aileen Riggen, champion woman swimmer, making a graceful dive.
2—Testing the water in Washington's "Learn to Swim" Campaign.
3—Edwin T. Meredith, Secretary of the Department of Agriculture.
4—Elmer D. Ball, of Iowa, recently appointed Assistant Secretary of Agriculture.
5—Tomb of Christopher Columbus in the Cathedral at Santo Domingo.
6—Little Blanca Noel ready for play on the beach at Southampton.
7—Sir Thomas Lipton's Shamrock IV put up a good fight to get this cup back to England.
8—Dancing is growing to be a popular past time on Manhattan Beach.
9—You're out. The Umpire must be careful these days when plays are recorded by photography.

Whispering Smith

by Frank H. Spearman

CHAPER XXI

Supper in Camp

"And I brought it on myself. So we do seek it, don't we? And trouble, I must hold, is like woman. 'Waits' I strike out as unpleasantly suggestive; let it go. So, then, trouble is like a lovely woman, loveliest when conquered. Now, Miss Dunning, if you have a spark of human kindness you won't turn me down on that proposition. By the way, I have something put down about trouble."

He was laughing. Dicksie asked herself if this could be the man about whom floated so many accusations of coldness and cruelty and death. He drew a notebook from a waistcoat pocket.

"Oh, it's in the notebook! There comes the black notebook," exclaimed McCloud.

"Don't make fun of my notebok!"

"I shouldn't dare." McCloud pointed to it as he spoke to Dicksie. "You should see what is in that notebook; the record, I suppose, of every man in the mountains and of a great many outside."

"And countless other things," added Marion.

"Such as what?" asked Dicksie.

"Such as you, for example," said Marion.

"Am I a thing?"

"A sweet thing, of course," said Marion ironically. "Yes, you; with color of eyes, hair, length of index finger of the right hand, curvature of thumb, disposition whether peaceable or otherwise, and prison record, if any."

"And number of your watch," added McCloud.

"How dreadful!"

Whispering Smith eyed Dicksie genially. "They are talking this nonsense to distract us, of course, but I am bound to read you what I have here, if you will graciously submit."

"Submit? I wait to hear it," laughed Dicksie.

"My training in prosody is the slightest, as will appear," he continued," and synecdoche and Schenectady were always on the verge of getting mixed when I went to school. My sentiment may be termed obvious, but I want to offer a slight apology on behalf of trouble; it is absurde too much. I submit this

"SONG TO TROUBLE

"Here's to the measure of every man's worth
Though when men are wanting it grieves us.
Hearts that are hollow we're better without,
Hearts that are loyal it leaves us.
"Trouble's the dower of every man's birth,
A nettle adversity flings us;
It yields to the grip of the masterful hand,
When we play coward it stings us.
"Chorus."

"Don't say chorus; that's common."

"I have to say chorus. My verses don't speak for themselves, and no one would know it was a chorus if I didn't explain. Besides, I'm short a line in the chorus, and that is what I'm waiting for to finish the song.

"Chorus:

"Then here's to the bumper that proves every friend!
And though in the drinking it wrings us,
Here's to the cup that we drain to the end,
And here's to—

There I stick. I can't work out the last line."

"And here's to the hearts that it brings us!" exclaimed Dicksie.

"Fine!" cried McCloud. " 'Here's to the hearts that it brings us!' "

Dicksie threw back her head and laughed with the others. Then Whispering Smith looked grave. "There is a difficulty," said he, knitting his brows. "You have spoiled my song."

"Oh, Mr. Smith, I hope not! Have I?"

"Your line is so much better than what I have that it makes my stuff sound cheap."

"Oh, no, Gordon!" interposed McCloud. "You don't see that one reason why Miss Dunning's line sounds better than yours is owing to the differences in your voices. If she will repeat the chorus, finishing with her line, you will see the difference."

"Miss Dunning, take the notebook," begged Whispering Smith.

"And rise, of course," suggested McCloud.

"Oh, the notebook! I shall be afraid to hold it. Where are the verses, Mr. Smith? Is this fine handwriting yours?

Then here's to the bumper that proves every friend!

Isn't that true?

And though when we drink it it wrings us,
Here's to the cup that we drain to the end.

Even women have to be plucky, don't they, Marion?

And here's to the hearts that it brings us!"

Whispering Smith rose before the applause subsided. "I ask you to drink this, standing, in condensed milk."

"Have we enough to stand it?" interposed Dicksie.

"If we stand together in trouble, that ought to be enough," observed McCloud.

"We're doing that without rising, aren't we?" asked Marion. "If we hadn't been in trouble we shouldn't have ventured to this camp tonight."

"And if you had not put me to the trouble of following you and it was a lot of trouble!—I shouldn't have been in camp to-night," said Whispering Smith.

"And if I had not been in trouble this camp wouldn't have been here to-night," declared McCloud. "What have we to thank for it all but trouble?"

A voice called the superintendent's name through the tent door. "Mr. McCloud?"

"And there is more trouble," added McCloud. "What is it, Bill?"

"Twenty-eight and nine-tenths on the gauge, sir."

McCloud looked at his companions. "I told you so. Up three-tenths. Thank you, Bill; I'll be with you in a minute. Tell Cherry to come and take away the supper things, will you? That is about all the water we shall get to-night, I think. It's all we want," added McCloud, glancing at his watch. "I'm going to take a look at the river. We shall be quiet now around here until half-past three, and if you, Marion, and Miss Dunning will take the rent, you can have two hours' rest before we start. Bill Dancing will guard you against intrusion, and if you want ice-water ring twice."

CHAPTER XXII

A Talk With Whispering Smith

When Whispering Smith had followed McCloud from the tent, Dicksie turned to Marion and caught her hand. "Is this the terrible man I have heard about?" she murmured. "And I thought him ferocious! But is he as pitiless as they say, Marion?"

Marion laughed—a troubled little laugh of surprise and sadness. "Dear, he isn't pitiless at all. He has unpleasant things to do, and does them. He is the man on whom the railroad relies to repress the lawlessness that breaks out in the mountains at times and interferes with the operating of the road. It frightens people away, and prevents others from coming in to settle. Railroads want law and order. Robbery and murders don't make business for railroads. They depend on settlers for developing a country, don't you know; otherwise they would have no traffic, not to speak of wanting their trains and men let alone. When Mr. Bucks undertook to open up this country to settlers he needed a man of patience and endurance and with courage and skill in dealing with lawless men, and no man has ever succeeded so well as this terrible man you have heard about. He is terrible, my dear, to lawless men, not to anyone else. He is terrible in resource and in daring, but not in anything else I know of, and I knew him when he was a boy and wore a big pink worsted scarf when he went skating."

"I should like to have seen that scarf," said Dicksie reflectively. She rose and looked around the tent. In a few minutes she made Marion lie down on one of the cots. Then she walked to the front of the tent, opened the flap, and looked out.

Whispering Smith was sitting before the fire. Rain was falling, but Dicksie put on her close-fitting black coat, raised the door-flap, and walked noiselessly from the tent and up behind him. "Alone in the rain?" she asked.

She had expected to see him start at her voice, but he did not, though he rose and turned around. "Not now," he answered as he offered her his box with a smile.

"Are you taking your hat off for me in the rain? Put it on again!" she insisted with a little tone of command, and she was conscious of gratification when he obeyed amiably.

"I won't take your box unless you can find another!" she said. "Oh, you have another! I came out to tell you what a dreadful man I thought you were and to apologize."

"Never mind apologizing. Lots of people think worse than that of me and don't apologize. I'm sorry I have no shelter to offer you, except to sit on this side and take the rain."

"Why should you take the rain for me?"

"You are a woman."

"But a stranger to you."

"Only in a way."

Dicksie gazed for a moment at the fire. "You won't think me abrupt, will you?" she said, turning to him, "but, as truly as I live, I cannot account for you, Mr. Smith. I guess at the ranch we don't know what goes on in the world. Everything I see of you contradicts everything I have heard of you."

"You haven't seen much of me yet, you know, and you may have heard much better accounts of me than I deserve. Still, it isn't surprising you can't account for me; in fact, it would be surprising if you could. Nobody pretends to do that. You must not be shocked if I can't even account for myself. Do you know what a derelict is? A ship that has been abandoned but never wholly sinks."

"Please don't make fun of me! How did you happen to come into the mountains? I do want to understand things better."

"Why, you are in real earnest, aren't you? But I am not making fun of you. Do you know President Bucks? No? Too bad! He's a very handsome old bachelor. And he is one of those men who get all sorts of men to do all sorts of things for them. You know, building and operating railroads in this part of the country is no joke. The mountains are filled with men that don't care for God, man, or the devil. Sometimes they furnish their own ammunition to fight with and don't bother the railroad for years; at such times the railroad leaves them alone. For my part, I never quarrel with a man that doesn't quarrel with the road. Then comes a time when they get after us, shooting our men or robbing our agents or stopping our trains. Of course we have to get busy then. A few years ago they worried Bucks till they nearly turned his hair gray. At that unfortunate time I happened into his office with a letter of introduction from his closest Chicago friend, Willis Howard, prince of good men, the man that made the Palmer House famous—yes. Now I had come out here, Miss Dunning—I almost said Miss Dicksie, because I hear it so much——"

"I should be greatly set up to hear you call me Dicksie. And I have wondered a thousand times about your name. Dare I ask—why do they call you Whispering Smith? You don't whisper."

He laughed with abundance of good-humor. "That is a ridiculous accident, and it all came about when I lived in Chicago. Do you know anything about the infernal climate there? Well, in hicago I used to lose my voice whenever I caught a cold—sometimes for weeks together. So they began calling me Whispering Smith, and I've never been able to shake the name. Odd, isn't it? But I came out to go into the real estate business. I was looking for some gold-bearing farm lands where I could raise quartz, don't you know, and such things—yes. I don't mind telling you this, though I wouldn't tell it to everybody——"

"Certainly not," assented Dicksie, drawing her skirt around to sit in closer confidence.

"I wanted to get rick quick," murmured Whispering Smith, confidentially.

"Almost criminal, wasn't it?"

"I wanted to have evening clothes."

"Yes."

"And for once in my life two pairs of suspenders—a modest ambition, but a gnawing one. Would you believe it? Before I left Buck's office he had hired me for a railroad man. When he asked me what I could do, and I admitted a little experience in handling real estate, he brought his fist down on the table and swore I should be his right-of-way man."

"How about the mining?"

Whispering Smith waved his hand in something of the proud manner in which Bucks could wave his presidential hand. "My business, Bucks said, need not interfere with that, not in the least; he said that I could do all the mining I wanted to and I have done all the mining I wanted to. But here is the singular thing that happened: I opened up my office and had nothing to do; they didn't seem to want any right of way just then. I kept getting my check every month, and wasn't doing a hand's turn but riding over the country and shooting jack-rabbits. But, Lord, I love this country! Did you know I used to be a cowboy in the mountains years ago? I mined more or less in the meantime. Occasionally I would go to Bucks—you say you dont' know him?—too bad!—and tell him candidly I wasn't doing a thing to earn my salary. At such times he would only ask me how I liked the job," and Whispering Smith's heavy eyebrows rose in mild surprise at the recollection. "One day when I was talking with him he handed me a telegram from the desert saying that a night operator at a lonely station had been shot and a switch misplaced and a train nearly wrecked. He asked me what I thought of it. I discovered that the poor fellow had shot himself and in the end we had to put him in the insane asylum to save him from the penitentiary—but that was where my trouble began.

"It ended in my having to organize the special service on the whole road to look after a thousand and one things that nobody else had—well, let us say time or inclination to look after; fraud and theft and violence and all that sort of disagreeable thing. Then one day the cat crawled out of the bag. What do you think? That man who is now president of this road had somewhere seen a highly colored story about me in a magazine, a ten-cent magazine, you know. He had spotted me the first time I walked into his office, and told me a long time afterward it was just like seeing a man walk out of a book, and that he had hard work to keep from falling on my neck. He knew what he wanted me for; it was just this thing. I left Chicago to get away from it, and this is the result. It is not all that kind of thing, oh, no! When they want to cross a reservation I have a winter in Washington with our attorneys and dine with old friends in the White House, and the next winter I may be on snowshoes chasing a band of rustlers. I swore long ago I would do no more of it—that I couldn't and wouldn't. But it is Bucks. I can't go back on him. He is amiable and I am soft. He says he is going to have a crown and harp for me some day, but I fancy—that is, I have an intimation—that there will be a red-hot protest at the bar of Heaven," he lowered his tone, "from a certain unmentionable quarter when I undertake to put the vestments on. By the way, I hear you are interested in chickens. Oh, yes, I've heard a lot about you! Bob Johnson, over at Oroville, has some pretty bantams I want to tell you about."

Whether he talked railroad or chickens it was all one: Dicksie sat spellbound; and when he announced it was half-past three o'clock and time to rouse Marion, she was amazed.

Dawn showed in the east. The men eating breakfast in tents were to be sent on a work-train up a piece of Y-track that led as near as they could be taken to where they were needed. The train had pulled out when Dicksie, Marion, McCloud and Whispering Smith took horses to get across to the hills and through to the ranch-house. They had ridden slowly for some distance when McCloud was called back. The party returned and rode together into the mists that hung below the bridge. They came out upon a little party of men standing with lanterns on a piece of track where the river had taken the entire grade and raced furiously through the gap. Fog shrouded the light of the lanterns and lent gloom to the silence, but the women could see the group that McCloud had joined. Standing above his companions on a pile of ties, a tall young man holding a megaphone waited. Out of the darkness there came presently a loud calling. The tall young man at intervals bawled vigorously into the fog in answer. Far away could be heard, in the intervals of silence, the faint clang of the work-train engine-bell. Again the voice came out of the fog. McCloud took the megaphone and called repeatedly. Two men rowed a boat out of the backwater behind the grade, and when McCloud stepped into it, it was released on a line while the oarsmen guided it across the flood until it disappeared. The two megaphone voices could still be heard. After a time the boat was pulled back again, and McCloud stepped out of it. He spoke a moment with the men, rejoined his party, and climbed into the saddle. "Now we are off," said he.

CHAPTER XXIII

At the River

They found the ranch-house as Marion and Dicksie had left it, deserted. Puss told them everyone was at the river. McCloud did not approve Dicksie's plan of going down to see her cousin first. "Why not let me ride down and manage it without bringing you into it at all?" he suggested. "It can be done."

McCloud and Smith had been joined by Dancing on horseback, and they made their way around Squaw Lake and across the fields. The fog was rolling up from the willows at the bend. Men were chopping in the brush, and McCloud and his companion soon met Lance Dunning riding up the narrow strip of sand that held the river off the ranch.

McCloud greeted Dunning, regardless of his amazement, as if he had parted from him the day before. "How are you making it over here?" he asked. "We are in pretty good shape at the moment down below, and I thought I would ride over to see if we could do anything for you. This is what you call pretty fair water for this part of the valley, isn't it?"

Lance swallowed his astonishment. "This isn't water, McCloud; this is hell." He took off his hat and wiped his forehead. "Well, I call this white, anyway, and no mistake—I do indeed, sir! This is Whispering Smith, isn't it? Glad to see you at Crawling Stone, sir."

(Continued Next Week.)

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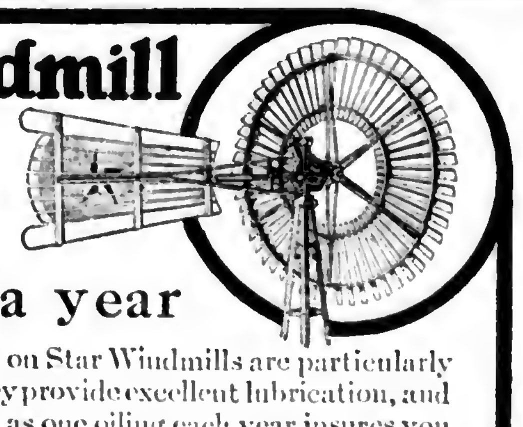

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Markets

PHILADELPHIA PRODUCE

August 2, 1920.

The potato market is lower than it has been at any time during the past several months. Nearby N.J. season is now on in full force and at the same time there are still a few Eastern Shores arriving. There were 16 cars of Eastern Shore potatoes at the depot this morning and five or six cars of N. J. sacked potatoes. In addition to these there were large amounts hauled in by the nearby farmers in ⅝ baskets. The Eastern Shore potatoes sold mostly at $4.50@4.75 on best stock with poor and defective at $3.50@4, and culls at $1@2 per barrel. The five cars of N. J. sacked potatoes were selling rather slowly at $4.25@4.50 per sack of 150 pounds. The N. J. ⅝ baskets sold generally at $1.10@1.20 per basket for prime with poor and scabby No. 1's at 75c@$1, and No. 2's at 50@75c per basket.

The first new crop sweet potatoes of the season made their appearance today from N. C. and sold from $10@15 per barrel.

VEGETABLES—With the nearby crops of practically all kinds of seasonable vegetables now being marketed, it is almost useless for vegetables from far off points to try to compete. Penn. and N. J. are supplying almost entirely with the possible exception of peas, lettuce and the few white potatoes and sweet potatoes as mentioned above. Both green and wax beans are in moderate supply, but as they are seldom fancy, prices range mostly from 50@75c per basket with the occasional lots of fancy selling around $85@90c per basket with a few up to $1.

Bunch beets remain quiet and practically unchanged at mostly 2@3c per bunch. Cabbage after having been in excessive supply for the past several days is showing signs of improvement and this morning sales were made at 20@30c per ⅝ basket while the barrels sold at 50@75c per barrel exclusive of the barrels. Carrots remain firm and unchanged at $2@3.50 per 100 bunches with loose carrots selling at 75c@$1. per ⅝ baskets. Celery is very plentiful and dull at 30@50c per bunch while the celery hearts are selling slowly at 6@8c per bunch. Sugar corn was very scarce today and prices were very strong at $1.50@2 per ⅝ basket.

Cucumbers are also doing better as sales were made today at 25@65c per ⅝ basket while the cucumber pickles are firmer at 65c@$1 per ⅝ basket. There was one car of Norfolk egg plants here this morning which sold at $4.50@5 per 64 quart crate. N. J. egg plants are in light supply and firm at $1.50@2 per ⅝ basket. N. Y. lettuce is firm when in good condition and showing good quality at $1.50@1.75 per box, but some of it is very poor and sold today as low as 60@75c per box.

Lima beans are in good demand when fancy and pods well filled at $2.50@3.25 per hamper and $2@2.50 per ⅝ basket, but many of the offerings are poorly filled pods and these are hard to sell at lower prices. Yellow onions are showing very little change at 40@50c per ⅝ bushel basket. There are some white onions now being wanted for pickling purposes and these are selling all the way from $2@3.50 per hamper. About the only peas on the market are from N. Y. Thirteen cars of them caused the market to decline, and sales were made mostly at $1.50@2 per bushel, with some very poor lower.

N. J. peppers are about steady at 40@60c per ⅝ basket. Romaine is in slow demand at 50c@$1.25 per box. Scallions show very little change at $1@1.50 per 100 bunches. Squash is very dull and selling from 10@30c per ⅝ basket on the white, with the green or Italian squash at 15@50c per ⅝ basket. Tomatoes are in fairly liberal supply but meeting a good demand, the earlys selling at 30@60c per ⅝ basket and the second earlys at 50c@$1 per basket and the second earlys 30c per basket. Turnips are in very slow demand at 20@35c per ⅝ basket. Parsley is also slow at $1@1.25 per hamper.

FRUITS—N.J. apples have been very plentiful and very low prices have been prevailing. It would appear as if the glut of the early apples has passed as the market appears to be stronger than it was last week. At this writing No. 1 green varieties of apples are selling at 60c@$1 per ⅝ basket and the red varieties at 75c@$1.25 per ⅝ basket, while the No. 2's sell at 40@60c, and the culls or drops at 15@30c per basket. Some Md. and Del. apples in hampers are selling at 75c@$1.50 per hamper on the green varieties at $1.50@2 per hamper on red varieties. N. J. peaches are gradually getting better as the season advances and the later fruit appears, and at this writing N. J. peaches are selling at 75c@$1.50 per ⅝ basket. There are quite a few Del. peaches arriving which are selling at about the same as the N. J. fruit. Cantaloupes from Md. have made their appearance on the market but they are yet a trifle too green and prices show the wide range of $3@5 per crate. The nearby dewberries seem to be getting scarce as the market has been getting a little firmer each day during the past few days and at this writing dewberries are selling from 23@30c per quart. Huckleberries are mostly poor and showing a wide range in price, some selling at 25@26c per quart, with some poor as low as 15@17c per quart. Raspberries are nearly over and the few remaining bring the fine price of 18@20c per pint. A few sour cherries are still left and selling around 65@75c per four quart basket.

POULTRY—The market on live fowls continues active and prices are showing but very little change from day to day with fancy large fowls cleaning up promptly at 40@42c per pound, while the light to medium sizes are steady at 36@38c. Leghorn fowls are commanding from 35@36c per pound. Old roosters remain practically unchanged from day to day at 25@26c per pound. Broiling chickens have been gradually easing off a little until at this writing best broilers are selling at 40@48c per pound with the less desirable size broilers at 34@39c per pound. Old ducks have firmed up a little and command 30@32c per lb., while the spring ducks remain unchanged at 30@35c per pound.

EGGS—There has been no change in the egg market during the past few days. Strictly fine eggs that are free from hot weather defects are scarce and such command a premium over quotations which are about as follows: Penn. and other nearby current receipts 49@50c per dozen; Penn. and other nearby firsts 51@55c per dozen; undergrades 44@47c per dozen; Western firsts 47@50c; western extra firsts 51@53; seconds and poorer 30@45c per dozen.

BALTIMORE PRODUCE

July 31, 1920.

BUTTER—Creamery, Western Separator, extras, 58@59c; do., firsts, 57@58c; Western prints, ½ pound, extras, 60@61c; do., firsts, 57@59c; do. 1 pound, extras, 60@61c; do. firsts, 57@59; nearby creamery, extras, 48@50c; do. firsts, 46@47c; dairy prints, Maryland, Pennsylvania and Virginia, extras, 43@44c; do, 42@43c; store packed, firsts, 41c@42c.

EGGS—Western Maryland, Pennsylvania and nearby, firsts, 46c; Eastern Shore, Maryland and Virginia, firsts, 46c; Western (Ohio) firsts, 46c; West Virginia, firsts, 44@45c; Southern (North Carolina), firsts, 43@44c.

LIVE POULTRY—Chickens, spring, under 1¼ pounds, lb. 40c; do, 1¼ to 1½ pounds, lb. 45c; do, old roosters, lb., 20@21c; do, old hens, over 4 pounds, lb., 37c; do., small, lb., 36c; do, white Leghorn hens, lb., 36c; do., young Leghorns, 1½ pounds, lb., 40c; do, under 1½ pounds, lb., 35@40c. Ducks, white Pekins, young, lb., 38@40c; do, spring 4 pounds and over, lb., 35@38c; do, smaller, poor, lb., 30@35c. Pigeons, old, pair, 35@40c; do, young, pair, 35@40c.

NEW YORK PRODUCE

July 31, 1920.

BUTTER—Weaker: receipts, 12,211 tubs; creamery, higher than extras, 55¼@56c; creamery, extras (92 score) 55c; creamery, firsts (88 to 91 score), 51½@54½c; packing stock, current make, No. 1, 44c.

EGGS—Irregular: receipts, 19,280 cases; fresh-gathered extra firsts, 51@52c; frsh-gathered firsts, 47@50c; state, Pennsylvania and nearby western hennery whites, firsts to extras, 60@70c; state, Pennsylvania and nearby western hennery browne, extras, 58@62c; state, Pennsylvania and nearby gathered browns and mixed colors, firsts to extras, 48@55c.

CHEESE—Steady: receipts, 2781 boxes; state whole-milk flats, current make, white and colored, specials, 27@28c; do, average run, 25@26½c; state, whole-milk twins, current make, specails, 26½@27¼c; do, average run, 25@26c.

LIVE POULTRY—Steady, prices unchanged. Dressed poultry quiet; western broilers, fresh, 53@58c.

VEGETABLES—Potatoes, L.I.bbl., $4@5; Jy., 150-lbs., $3.50@4; S'n., No. 1, $3.50@4.75; No. 2, $1@2; Culls, 50c@$1; Sweets, basket, Jersey, No. 1, $5@7; No. 2, $2@4. Beans, basket, Wax, 50c@$1.25; Green, 60c@$1.25; Italian, 50c@$1.50; Cranberry, 75c@$1.50; Fava, 50c@$1.25. Beets, nearby, bbl., $2.50@3.50; nearby, basket, 75c@$1; nearby, 100 bun., $1@2. Carrots, nearby, 100 bun., $2@3; nearby, basket, $1.25@2. Corn, Jy., 100 ears, $1@4. Celery, state, bunch, 15c@$1; Jy., bunch, 15@90c; crates, $2.50@7.50. Cucumbers, Jy., basket, 60c@$1; Jy., box, 50@75c; Jy., doz, 40@50c; Jy., pickles, basket, 75c@$1.25. Cabbage, L. I. bbl., 50@75c; L. I., 100 lbs., $2@2.50; Jy., bbl., 50@75c. Cauliflowers, nearby, bbl., $1@3; state, crt., $5@6.50. Eggplant, Jy., box, $1; Jy., basket, $2. Horseradish, bbl., $25@30. Kohlrabi, 100 bunches, $1@2. Kale, nearby, 25@50c. Leeks, nearby, 100 bun., $2@4; lb., 10@18c. Lima beans, Jy., basket, $1.50@4. Lettuce, state crate, 50c@$2; state, basket, 50c@$1.50; nearby, bbl., $1@2.50; nearby, basket, 50c@$1.25. Mushrooms, basket, Jersey, $4@5; Penn., $3@4; Buttons, $2@3; poor, $1.50@2. Okra, Jy., crt., $3@4. Onions, Jersey, Wh., bsk., 75c@$1.25; Yel. bsk., 75c@$1.10. Peppers, Jersey bsk., bullnose, $1@1.25; long, $1@1.25; Italian, $1; Finger, $1@1.25; Jy. bx., 75c@$1. Peas, state, bsk., $1@1.75; state, bag, 75c@$1.25; L.I. bag, 50c@$1.25; Jy., bsk., 50c@$1.25. Parsley, nearby, 100, $1@4; nearby bsk., 50c@$1.50. Radishes, nearby, 100, bch., $1@3. Romaine, nearby, bbl., $1@2; nearby, bsk., 55@75c; state, crt., 50c@$1.50; state, bsk., 50c@$1. Rhubarb, 100 bch., $2@3. Scallions, bch., nearby, 100, $1@1.50. Spinach, nearby, bbl., 50c@$1; state, bsk., 50@75c. Squash, Wh., bbl., $2@2.50; Wh., bsk., 75c@1.25; Wh., box, 50c@$1; Yel., bbl., $1.50@2; Yel., bsk., 50@75c; Yel., box, 50c; Ital., bsk., 50c@$1; Marrow, bbl., $1.60@1.75. Turnips, White, bbl., $1@2; Rutabaga, bbl., $1.25@2; bag., $1@1.75. Tomatoes, Up-Jy., box, 75c@$3; No. 2, box, 50@75c; So-Jy., Acme, $1@2; Stone, 75c@$1.50; Grant, 50@75c; No. 2, box, 40@50c; Jy., 12-qt. bsk., 40@60c; Jy., carrier 75c@$2; Md., crt., 50c@$1.50; Balt., crt., $2.60@2.75.

FRUIT—Apples, barrels, $1.50@8. Pears, barrels, $6@8.50; baskets, $1.50@3.50. Peaches, crate, Jersey, $1.50@2.75. Huckleberries, Pa., quart, 12@26c; Jy., quart, 12@26c. Blackberries, Jy., quart, 20@30c; up-river, 25@35c. Raspberries, red, pint, 13@25c; blackcap, 10@15c. Gooseberries, large, quart, 17@20c; small, quart, 14@15c. Cherries, red, sour, quart, 15@18c; 8-lb. basket, 75@85c; 20-lb. basket, $2.25; black, sour, quart, 20@25c; 8-lb. basket, $1.15@1.25; 20-lb. basket, $2.25@2.75. Currants, red, quart, 7@11c.

YORK PRODUCE

July 31, 1920.

There were large crowds at the markets on Tuesday, Friday and Saturday. Prices ruled firm on all lines outside of beans and potatoes. The berry season is almost gone; prices ruled high except possibly on one market day. Apples are plentiful, but of an inferior quality, with few exceptions. Eggs are slow at 48c per doz.

EGGS—45@50c per doz.

BUTTER—Country, 60@65c; separator, 70@75c; milk, 14c qt.

POULTRY—Hens, 27@30c lb.; springers, 32@35c; dressed, $1.25@2.50.

VEGETABLES—Potatoes, 30@50c ½ peck; cabbage, 3@10c hd; lettuce, 5@10c hd; radishes, 5c bch.; beets, 5c bch; onions, 6c bch; peas, 15@25c ½ peck; beans, 8c ½ peck; corn, 40@50c doz.; ham, sliced, 45@80c lb; whole, 40@45c lb.

FRUIT—Apples, 10@50c ½ peck; 5@15c bx.; blackberries, 20@30c bx; raspberries, 30c bx; tomatoes, 20@40c bx; 6@10c each.

RETAIL GRAIN MARKET—Wheat, $3; corn, $2; oats, $1.40; rye, $1.75; bran, $4 per cwt.; middlings, $4.25 per cwt.

WHOLESALE GRAIN MARKET—Wheat, $2.60@2.80; corn, $1.58; oats, $1; rye, $1.40; bran, $3.25 per cwt.; middlings, $3.75 per cwt.

PITTSBURGH PRODUCE

July 31, 1920.

BUTTER—Prints, 59½@60c; tubs, 59@59½c; cooking, 45@48c; Ohio, 53½@54½c.

CHEESE—New York full cream, 33@35c; Roquefort, $1@1.20; Wis. swiss, 20-lb. block, do, 1-lb. brick, 35@38c; swiss, 20-lb. block, 39@40c; Phila. cream, doz, $1; Longhorns, 35@36c; Limburger, 1-lb., 39c; do, 2-lb. 38c.

EGGS—Fresh select, 51@52c; specials at mark, 48@49c; current receipts, 46@47c; do. candled, 49@50c.

VEGETABLES—Potatoes, Eastern Shore, $6.50@7; do. Jer. Cobblers, 150-lb. sacks, $6@6.50; do, No. 2, barrel, $2.50@3.75. Peppers, Jersey, hamper, $2.25@2.50; beans, wax and green, hamper, 50c@$1; do, lima, hamper, $3@4; do, quart, 65c; cabbage, h. g., bu., $1@1.15; do, Marietta, crate, $3@3.25; lettuce, h. g. box $1@1.50; turnips, bu. $2.25@2.50; green corn, doz., 50c; do., Marietta, hamper, $2.50@3; garlic, lb., 25@30c; parsley, doz., 50c; radishes, doz., 25@50c; tomatoes, Marietta, basket, $3@3.25; cucumbers, N.C., hamper, $1@1.25; do, Ashtabula, basket, $1.50@2; do, Marietta, hamper, $1.50@1.75; muchrooms, basket, $1.50@1.75; carrots, new, doz., 35@40c; beets, new, doz., 35@40c; green peas, bu., $1.75@2; celery, bunch, 25@50c.

FRUITS—Cherries, sour, 32-qt., crate, $6@7; green apples, bu., $1@2.50; pears, Bartlett, box, $3.75@4.25; watermelons, each, 40@85c; Raspberries, black, crate, $11@12; do, red crate, $12@14; dewberries, crate, $10@11; currants, crate, $6.50@7.50; huckleberries, crate, $8@8.50; do, basket, $1@3; peaches, crate, $3@4; do, bu., $3.75@4.

PHILADELPHIA LIVESTOCK

August 2, 1920.

Receipts for the week ending July 31, 1920, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Totals for week....	1923	7474	5035
Previous week.......	1680	8018	5232

CALVES—Receipts of calves were 2661 head against 2838 head previous week.

BEEF CATTLE—The market for steers and cows was quiet and unchanged, with moderate but ample offerings. Veal of fine quality was firm and higher, but the medium and under grades were quiet and unchanged. Quotations were as follows: Steers, good to choice, $15@16.50; fair to good, $13.50@15; common to fair, $11.50@13.50; cows, dairy, good to choice, 8¼@10c; do., fair to good, 7@8¼c; bulls, 7@10¼c; calves, extra to choice, $20@20.50; fair to good, $16@18; do. common, $11@13; Tennessee, $16@18; other southern, $8@10.

SHEEP AND LAMBS—There was little activity in the market for sheep and lambs and prices were easier. Supplies were ample for trade requirements. We quote: Sheared sheep, wethers, extra, $10@10.50; do., good to choice, $8.50@9.50; do, medium, $7@8; do, common, $2@5; ewes, heavy, fat, $7@8; lambs, spring, choice, $15.75@16.25; medium, $14@15; common, $9@11.

HOGS—There was a fair demand for desirable stock and values generally were steadily maintained. We quote: Best western, $18.50@19; good, nearby, $17@17.25.

CITY DRESSED STOCK—Steers, heifers and cows were steady at the close, with demand more active. Lambs and sheep were quiet and easier. Other knds were generally steady, with demand fair for choice stock. We quote: Steers, 20@26c; heifers, 16@24c; cows, choice, 18@21c; cows, light, 12@16c; calves, city dressed, choice, 29@31c; calves, country dressed, 25@27c; lambs, spring, choice, 31@33c; sheep, 16@20c; hogs, 25c.

LIVESTOCK MARKETS

July 31, 1920.

PITTSBURGH

HOGS—Receipts, 1000; steady; heavies, $16.; heavy Yorkers, $17.25@17.35; light Yorkers, $16.25@16.50; pigs, $15.75@16;

SHEEP AND LAMBS—Receipts, 600; steady; top sheep, $10; top lambs, $15.

CALVES—Receipts, 100; higher; top, $19.

CHICAGO

CATTLE—Receipts, 1500; compared with week ago, choice corn-fed steers mostly 35c to 50c higher, strong weights strengthening most; grassers very uneven, averaging 75@$1 lower; best she stock slow, 50c lower; in between irregular, 75c to $1.25 lower; canners 27@50c lower; handyweight butcher bulls, 25c lower.

SHEEP—Receipts none for week; lambs mostly 75c@$1.25 lower; fat sheep and breeding ewes steady to 50c lower; feeding lambs steady to 50c higher.

NEW YORK

CATTLE—Receipts, 620; no trading.

CALVES—Receipts, 530; steady; common to prime veals, $16@21; culls, $13@15; fed calves, $13@14; skimmilk calves, $11@11.50; westerns, $12.50@16.

SHEEP AND LAMBS—Receipts, 2925; weak; sheep (ewes), $10; culls, $4@5; yearlings, $10@11; lambs, $10@16; culls, $8@9.

HOGS—Receipts, 2075; no trading.

EAST BUFFALO

CATTLE—Receipts, 350; steady.

CALVES—Receipts, 150; $1.50 lower; $6@19.50.

HOGS—Receipts, 2200; 25@40c higher; heavy, $16.50@16.75; mixed, $17@17.25; light mixed, $16.50@16.75; mixed, $17@17.25; light, mixed and pigs, $17.25@17.50; roughs, $13@13.50; stags, $8@10.

SHEEP AND LAMBS—Receipts, 400; sheep steady; lambs, 25c lower; lambs, $8@15. Others unchanged.

PITTSBURGH HAY AND STRAW

July 31, 1920.

The railroads entering Pittsburgh made an extraordinary effort this week and brought to the market practically all the hay they had. Notwithstanding the unusual heavy receipts, the market did not break to any noticeable extent. There seemed to be a spirited demand for good old hay which took care of all arrivals at the present figures. Clover hay is not wanted but good sound prairie hay can be placed readily.

It looks as if the worst were over. At the present writing, billings in transit are very light while the demand appears to be steady. We look for a good hay market from now on. Straw receipts continue liberal with scarcely any demand for wheat or rye but oat straw can be placed at satisfactory figures. Ear corn and oats are uncertain with the market declining.

The following prices can be realized: No. 1 timothy, $34@34.50; standard timothy, $31@32; No. 2 timothy, $29@30; No. 3 timothy, $25@26; No. 1 light mixed, $29@30; No. 1 oat straw, $15@15.50; No. 2 oat straw, $14.50@15; No. 1 wheat straw, $14.50@15; No. 2 wheat straw, $14@14.50; No. 1 rye straw, $15@15.50; No. 2 rye straw, $14.50@15.

PHILADELPHIA HAY AND GRAIN

August 2, 1920.

BALED HAY AND STRAW—Receipts, 144 tons of hay and 1 car of straw. Dull and unchanged. Quotations follow: Timothy hay, No. 1, none here; No. 2, $38@39; No. 3, $32@34; sample, $27@31; no grade, $22@26. Clover-mixed hay—Light mixed, $35@37; No. 1 mixed, $33@34. Straw—No. 1 straight rye, $16@16.50; No. 2, do. $15@15.50; No. 1 tangled rye, $15@15.50; No. 2 do., $14@14.50; No. 1 wheat straw, $12.50@13; No. 2, do., $11.50@12; No. 1 oat straw, $13.50@14; No. 2 do., $12.50@13.

BRAN—Sold slowly at late decline. Car lots, including sacks; Soft winter bran, western, in 100-lb. sacks, per ton, $53@53.50; spring bran, in 100-lb. sacks, per ton, $52@52.50.

CORN—No. 2 Yellow, $1.68@1.73.

WHEAT—No. 1 red winter, $2.81@2.86; No. 2 do., $2.78@2.83; No. 3 do., $2.75@2.80; No. 4 do., $2.71@2.76; No. 5 do., $2.67@7.72.

OATS—Nominal in absence of transactions.

NEW YORK HAY AND GRAIN

July 31, 1920.

HAY—The market for mill feed was dull with an easier undertone. Buyers were indifferent and the market evidently felt the influence of the weakness in feeding grains as well as in the price of what and flour.

Quotations: City feed bran, $56; middlings, $58, in 100-pound sacks; red dog, $79, nominal, in 100 pound sacks, western spring bran, $52; standard middlings, $61; flour middlings, $60; red dog, $76, all in 100-pound sacks, 30-day shipment. Oat feed, $37; rye middlings, $58; white hominy feed, $67.50, all in 100-pound sacks. Cottonseed oil meal, $67; linseed oil meal, $62, in 100-pound sacks.

HAY AND STRAW—Most of the hay at 33d street shed is held in the hands of speculators and asking prices have been advanced. Very little actual business reported but a few sales effected and market is quotable somewhat higher. Rye straw steady. Oat and wheat straw dull. Hay, large bales, timothy, No. 1, $40@43; No. 2, $34@41; No. 3, $29@35; shipping, $26@31; No grade, $19@26. Clover, mixed, fancy, $35@40; No. 1, $28@34; No. 2, $26@30. Straw, large bales, No. 1 rye, $18@19; No. 1 oat, $11; No. 1 wheat, $11.

PHILADELPHIA DAIRY MARKET

August 2, 1920.

BUTTER—Receipts, 1545 tubs. The week closed with a steady market on fine table grades, but, as usual on Saturday, there was very little wholesale trading. We quote the following prices: Fresh, solid-packed creamery, high-scoring goods, 57½@59½c, the latter for jobbing sales; extra, 56½c; do. extra firsts, 54½@55½c; firsts, 50@56c; seconds, 45@49c; sweet creamery, chioce to fancy, 58½@60½c; fair to good, 51@57½c; ladle-packed, as to quality, 44@47c; packing stock, 39@44c; fancy brands of nearby prints were jobbing at 63@68c; good to choice, 58@65c; fair, 55@57c.

CHEESE—Firmly held. The quotations follow: New York whole milk, current make, fancy firsts, 27½@28c; common to fair, 24@27c; Longhorns, 27½@28c; single daisies, 27½@28c; jobbing sales of fancy goods, 29@30c.

TOBACCO MARKET

July 31, 1920.

Without tobacco Lancaster county would not maintain its position of the leading agricultural county of the whole U. S. In five census reports the county has led all others and now it is conceded that the envious position among the counties of the nation will be maintained in the 1920 enumeration. The nearest competitor in past years has been McLean county, Ill., followed closely by Los Angeles county, Cal., and then Whitman county, Wash. It is estimated that the total value of "garden spot" crops will this year total fully $50,000,000 of which tobacco will give a large proportion. With improved market facilities the crop should contribute a greatly increased amount from year to year. It is for this reason that so many are now working and it is probable that some sort of modern method will be in operation in time to handle much of the crop of the present year and thus to establish prices at which the remainder, too, may be sold.

It is noted that those in charge are considering the adaptability of plans and methods which have been successfully employed in other localities. It is known that plans will embody some sort of sales floor where tobacco will be offered either by sample or in entirety and that same will be sold at auction market at stated times with the usual privileges as to rejection, etc.

It is to be regretted that the admittedly leading county in the country should have lagged behind in so important a matter but the great tact and sagacity of an enterprising population will soon make amends for all lost time.

Meanwhile large sales of the residue of 1919 crop are reported from time to time. The sales are of course by dealers as the product has passed from growers but they are significant as showing an unobstructed right of way for the new product when ready. A late sale of this kind consisted of 700 cases averaging about 350 pounds each in weight. The price, it was stated, was approximately $37 per cwt.

INTERSTATE MILK PRICES

August 2, 1920.

Philadelphia milk prices in effect August first are as follows: For three percent milk, $4.20 per cwt., or basic quantity price per qt. of 9.1c. For 3.5 percent milk, $4.40 per cwt., or basic quantity price of 9.6 per qt. For four percent milk, $4.60 per cwt., basic quantity price of 10c per qt. The price for surplus milk will be determined and sent out at the end of the month. When milk is not tested the price f.o.b., Philadelphia is to be 10c per qt.

What Will You Pay Per Acre?

How Much per Acre Will Your Plowing Cost—this fall, next year and the years to come? How much will you pay for each acre you fit for seed? And just *what* will you be paying for?

Will You Pay for Feed to Keep Extra Horses alive and healthy while they do no work? Will you pay extra hired help at the rate of $50 a month or more for pay and keep? Or—

Will You, Like so Many Other Farmers who figure their costs, make an investment in a G-O Tractor that will bring increased profits on every acre every year?

Any G-O Owner Will Show You the facts in the G-O which insure increased production at lower cost. In the first place it's the simplest tractor in America to operate.

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Time is vital in the fertilizer situation this Fall. The world is short of wheat, the farms are short of labor. Fertilizer is needed more than ever, but the fertilizer manufacturers are short of cars and labor to load cars. It is impossible to supply the fertilizer needed this fall unless the shipping season is lengthened, and this can only be done by starting earlier. Why not place your order now for

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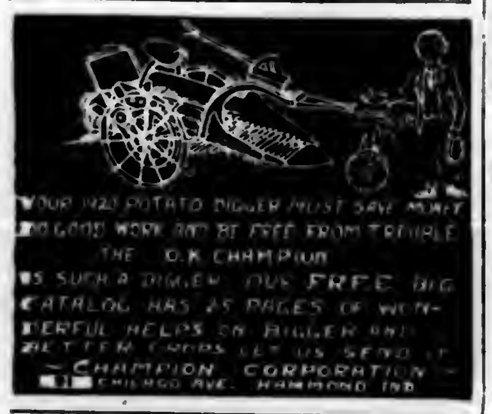

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CORN HARVESTER Self Gathering for cutting Corn, Cane and Kafir Corn. Cuts and throws in piles on harvester. Man and horse cuts and shocks equal to a Corn Binder. Sold in every state. Price only $28 with fodder binder. The only self gathering corn harvester on the market, that is giving universal satisfaction.—Dexter L. Woodward, Sandy Creek, N. Y., writes: "3 years ago I purchased a Corn Harvester. Would not take 4 times the price of the machine if I could not get another one." Clarence F. Huggins, Speermore, Okla., "Works 5 times better than I expected. Saved $40 dollars in labor this fall." Roy Apple, Farmersville, Ohio., "I have used a corn shocker, corn binder and 2 rowed machines, but your machine beats them all and takes less twine of any machine I have ever used." John F. Haag, Mayfield, Oklahoma., "Your harvester gave good satisfaction while using filling our Silo." K. F. Ruegnitz, Otis, Colo., "Just received a letter from my father saying he received the corn binder and he is cutting corn and cane now. Says it works fine and that I can sell lots of them next year." Write for free catalog showing picture of harvester at work and testimonials.
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Farm Tractors for sale—All makes—some new, exhibited at Fairs; others little used at demonstrations—guaranteed. Lowest cash prices, or on installments. Write for tractor and engine bulletin.
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For Sale—Grandsons of King of the May, 9001, and out of A. R. dams; one bull calf, price $150, and three ready for service, $250 and $300. An opportunity for the best kind of a foundation.
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For sale, the big type Flemish Giants, also high class New Zealand Reds; and B. B. Belgian Hares; Guinea Pigs, Ferrets; Pigeons; White Mice and Rats; Thoroughbred dogs, puppies a specialty; Blooded hogs. Write for prices. 10c for booklet.
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Guernsey Bull Calf 6 weeks old. Sire, Brookmead's Bonnie Lad 36209, out of Langwater stock. Dam, Imp. Easter Daisy 12583, out of Governor of the Chene.
GEORGE K. BOBB, LANSDALE, PA.

BROOME COUNTY (N. Y.) NOTES

It has been some time since I have sent a report from this section of the country.

Haying is well along and the yield is as good as usual. It is selling for $25 per ton in the field.

Old hay brings anywhere from $30 to $35 per ton. Quite a little was sold for $40 per ton just before pasture was ready.

The strawberry crop was the best in years. During the first week of picking they brought 40 cents per quart, the next week 35 cents and then went gradually down to 20 cents, but in two days began to go up again in price and stayed at 25 to 27 cents per quart. The picking lasted five weeks. Three weeks is usually as long as they last.

We have had plenty of rain and crops are doing fine. Yesterday the thermometer registered 59 degrees toward night. It has been very cold for July ever since the terrible electrical storm of last Friday night. The storm did not do near so much damage around here as it did a little ways from us. There was a constant flare of lightning all night long, seeming to bathe the whole earth in its brilliant glow, changing from blue to orange and crimson at times.

The lightning did many strange things. It entered one woman's home in the shape of a ball of fire about the size of a baseball, struck her on the arm and bounded off again, jingled the working things on the stove and disappeared without doing any more damage, except a small burn on her arm where the lightning hit, but she said it felt as if someone tossed a soft rubber ball against her arm. The rivers and creeks rose considerably.

Much hay has been wet after being cut, as it rains so often and hard, pouring rains, too. Fowls are 35 cents alive, 40 cents dressed; heavy broilers bring 50 cents a pound alive. Eggs are 50 cents a dozen. Everyone is complaining over their hens stopping laying.

New potatoes were being offered by a Binghamton store at 3 pounds for 25 cents. One woman looked at her sack and saw it was marked 2 pounds and when she weighed it she found it was only 2 pounds, so she complained to the authorities. They went to the store and found a number of sacks of potatoes ready for delivery. The sacks were marked 2 pounds, while the sign read 3 pounds for 25 cents. The dealer said it was a mistake, as he thought it was 3-pound sacks he filled.

Feed has dropped some in price. Bran is now $58 per ton. Mixed feed, $66 per ton; corn, $1.84 bushel; oats, $1.16 bushel; cornmeal, $68 ton; ground oats, $75 ton; oat straw is $17 ton, baled.

New potatoes, $4.50 bushel; old potatoes, $3. Huckleberries, $3.25 for a 14-quart basket; cabbage, new, is 5c to 7c lb.; red raspberries, 30c to 35c quart; currants, 15c quart; string beans, $2 bushel.

The wheat crop looks splendid. It is being cut this week. More wheat has been grown in this section than ever before. Thousands of bushels of strawberries were harvested in this valley. One man cleared $2000 from two acres. He had 55 to 60 bushels every day during the best of the pickings. Lots of new beds have been put out. One man bought a farm here last fall. On it was a field of strawberries that were picked last year. Without doing anything whatever to the field, at picking time he got over 800 bushels.—C. H., July 27.

WESTERN PA. FARM NOTES

Have had very backward harvest weather so far. Wheat crop is now being cut and is much poorer than last year. It is thin in many fields and is also greatly damaged by the fly. Hay crop is not as heavy as last year but has improved during the last three weeks. Young clover seems to have a fairly good start. Many people have not started to harvest yet and it is going to make them late. Oats look good and will be as much better crop than last year.

Potato crop looks fairly good but there are some very poor stands and the acreage is not as large as last year. Pasture is good. Mercer County farmers pooled their wool but there seems to be no market for it. Cows are high and bring from $75 to $125 for grades. Beef cattle low and many people who kept steers the past year have kept them at a loss.

Butter is worth 40c to 50c; eggs, 45c; potatoes, old, $4 bushel, and a few new ones selling out of stores at $1.25 per peck. Poultry is not as large a crop as last year as those who have to buy their feed are scared out by the high feed prices. Shelled corn is $2.25 bushel; oats, $1.25 bushel; wheat around $3; buckwheat, $4 per cwt.; bran, $3.50 per cwt.; wheat middlings, $3.75 cwt.; hay, $34 ton, and everything else accordingly.

Farm help is scarce and in many places is simply not to be had and wages are beyond many farmers' reach. The fruit crop seems to be pretty good in spite of late frosts. There are plenty of cherries, peaches and small fruits and the apple crop is fairly good in orchards that were not eaten up with codling moth or other pests. Many orchards in this section were simply stripped and had to grow a second crop of foliage. These, of course, had no fruit on. If farmers do not spray regularly they will lose some of their orchards. In fact, there are already some trees that have been killed.—M. P. M., Mercer Co., Pa., July 20th.

ALFALFA

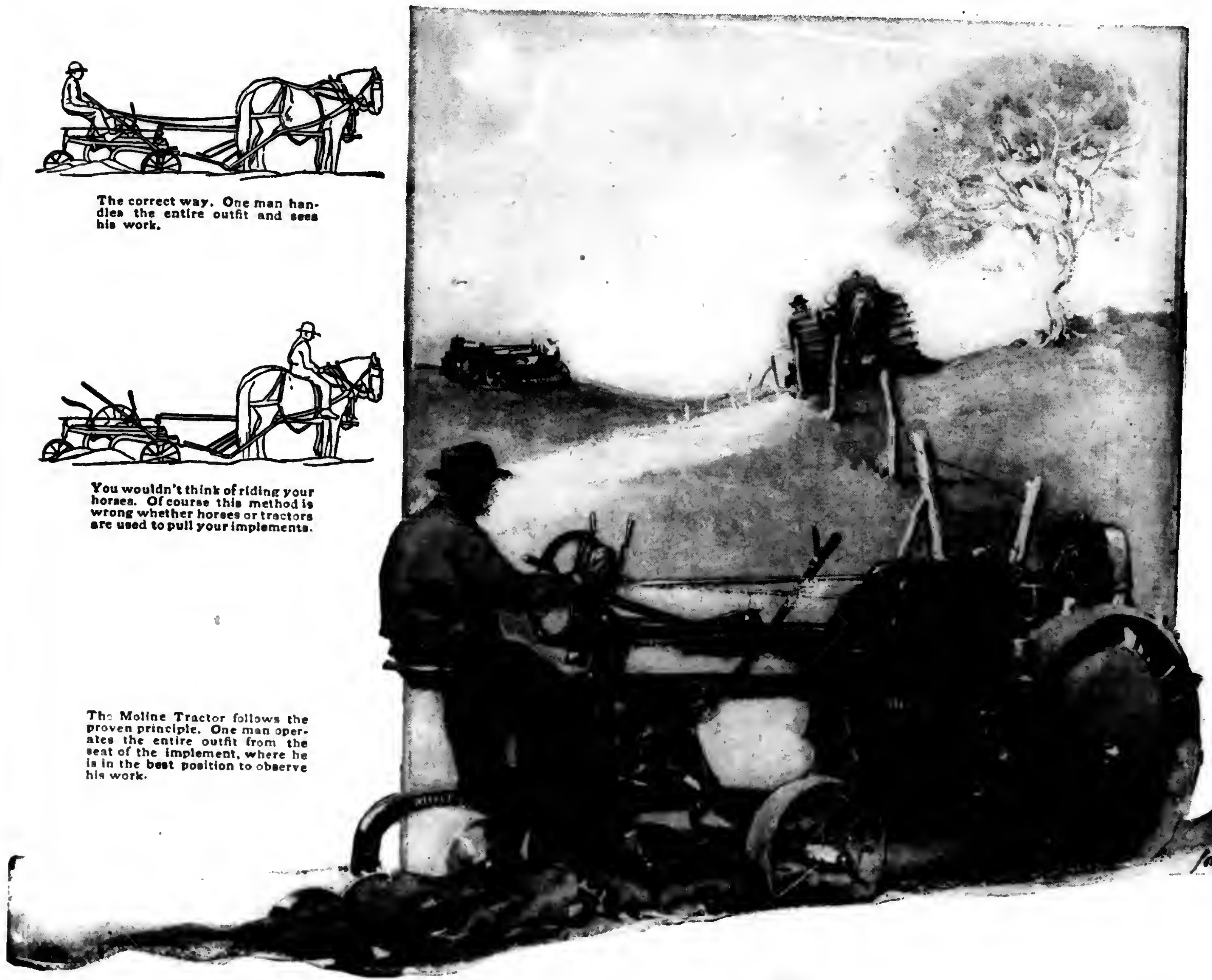
I have often read articles on the best methods of starting alfalfa. Usually it is recommended that the soil be well prepared, heavily limed and after cultivating several times the seed is sown about August 1st. Usually inoculation is also found necessary.

Last August I visited the Kinchloe farm in Fairfax Co., Va. Among other interesting things that Mr. Kinchloe showed me was an oats stubble where he had harvested a crop of oats a few weeks before. He had sown alfalfa and herds grass mixed when he sowed his oats. He had not inoculated his soil and had never tried to grow alfalfa before on his farm. However, the alfalfa was more than two feet high and was in full bloom. There was a number of stocks from each root crown and it looked as if conditions were ideal for its growth. From the appearance of this alfalfa it seems that alfalfa does not need so much petting to get it to grow if soil conditions are favorable.

About twenty miles from this farm at Mt. Vernon I noticed a considerable scatterment of alfalfa spring up in the meadow after the hay harvest. I was told that General Washington grew alfalfa on this farm during his lifetime.

It seems strange that such a valuable crop as alfalfa if it was known in this early day that it would be so neglected in a section of country where it promises so well.—A. J. Legg, W. Va.

MOLINE
The Universal Tractor



The correct way. One man handles the entire outfit and sees his work.

You wouldn't think of riding your horses. Of course this method is wrong whether horses or tractors are used to pull your implements.

The Moline Tractor follows the proven principle. One man operates the entire outfit from the seat of the implement, where he is in the best position to observe his work.

In a 10-hour day one man and a Moline Tractor can plow from 7 to 9 acres; disc from 25 to 35 acres; seed from 25 to 35 acres; mow from 25 to 40 acres; cultivate from 12 to 20 acres; and harvest from 25 to 40 acres. In addition the machine will do a great variety of other work and all ordinary belt jobs.

Compare these results with those of ordinary methods. In many cases the Moline enables one man to do at least twice as much work. These facts are borne out by the results obtained by Moline owners.

Moline owners in 37 states say that the Moline Tractor saves an average of one man per farm, as well as five horses, because it does all field work, including cultivating.

The Moline Tractor increases production by enabling one man to do more work, and decreases the cost of production by saving help and horses.

Profits of from $500 to $2200 a year, from the Moline Tractor alone, are being reported by Moline owners from all sections of the country.

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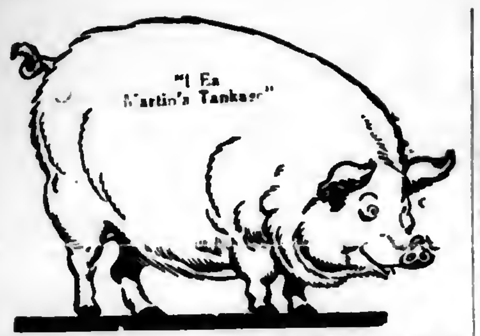

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Produces the Big Ones

It takes just as much time to feed good, wholesome tankage as it does the poor kind. And it costs *less* in the end. You can always depend on Martin's Tankage. Only the best of meat scraps, carefully sterilized, are used. Sold with a guarantee. Write for feeding directions and prices.

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Swine

Donegal Farms Duroc Sale
August 28, 1920

45 head including 20 bred gilts, 4 bred sows, 3 yearl'ng boars, 2 fall boars (one by Pathfinder) 16 spring gilts and boars of Colonel Orion Pathfinder and Cherry King breeding.

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Choice breeding stock, all ages. The best of breeding and out-standing individuality. Trios of spring pigs not akin. Thirty-six prominent Eastern herds to select from. We ship only the very best quality registered stock. Prices right and satisfaction guaranteed. State your wants when inquiring.
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The world's grand champion herd—Home of two grand champion boars, one grand champion sow. Write for illustrated catalog. It is free. Stock of all ages for sale.
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PATHFINDER'S RIPPER
By PATHFINDER
dam by Great Sensation, heads our Duroc herd. Line bred Pathfinder offering of 40 head at Public Auction Dec. 2nd. Get a catalog.
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10 young sows, bred to Fashion Giant, to farrow September litters. Spring and service boars. For catalog and price-list address
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HAMPSHIRES
Bred gilts for fall farrow. Their first litter usually pays for them. Free circular. Guernsey cattle.
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All ages. Strong and vigorous stock. When you buy you want the best, don't you? Then write us. Inspection invited. ROSS B. WITMER, LAMPETER, PA. Member Lanc. Hampshire Breeders' Co-operative

REGISTERED DUROC-JERSEY PIGS
$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs.
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EDGEWOOD HAMPSHIRES
Everything sold. Booking orders for gilts bred for fall farrow, and pigs for Pig Club work only.
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FOWLER'S PURE BRED HAMPSHIRES
Will please you.
Best and largest herd in East.
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Registered Durocs Best blood lines. Sold out at present. Will book orders for spring pigs. Northumberland County Duroc-Jersey Breeders' Association, J. M. FRY, Corresponding Secretary, Sunbury, Pa.

Try Reg. Big Type Spotted Poland
Chinas. The hog of the hour. Write for prices. Satisfaction guaranteed or money refunded.
O. CLYDE THOMPSON, Chambersburg, Pa., R. 10.

NEW YORK FARMERS POOL WOOL

Wool growers of New York State are showing themselves good business men. "When no one wants your product it is a good time to store it and await developments," said W. H. Baker, President of the Cayuga Wool Growers' Association, in discussing the present wool situation, and this is just what New York State wool growers are doing. Altho they are busy with their hay and wheat harvest they are doing considerable thinking just the same.

This thinking resulted in a meeting of the representatives of wool growers' associations. The meeting was held at Syracuse on the 8th of July and was called by the directors of the State Federation of Wool Growers' Associations. Twenty-one county associations had representatives at the meeting. The meeting was called to consider the advisability of a State wool pool to take in the unsold 1920 clips. Wool pools organized in the West last year were successful. The success that these western associations had guided the New York State wool growers in their decision to proceed with a similar pool.

Wool Pool Idea Adopted

A. W. North, prominent in Delaware County wool circles, started the plan by offering the following resolution, which was adopted:

"Whereas, Co-incident with the high wages paid mill workers, 5 percent dividends declared on textile stocks and unheard of selling figures on woolen goods, and on shoddies offered as virgin wool, suddenly and without reason, on or about May 20, 1920, the prices announced by wool buyers for 1920 fleeces dropped to a level insufficient even to cover production costs on the farm; and

"Whereas, The manufacturing requirements are such that raw wool should continue to command a fair price if offered to the trade in sufficient quantity, and

"Whereas, A State pool would more adequately meet the existing wool market requirements by providing the amounts and grades demanded and recognized by the trade; Now

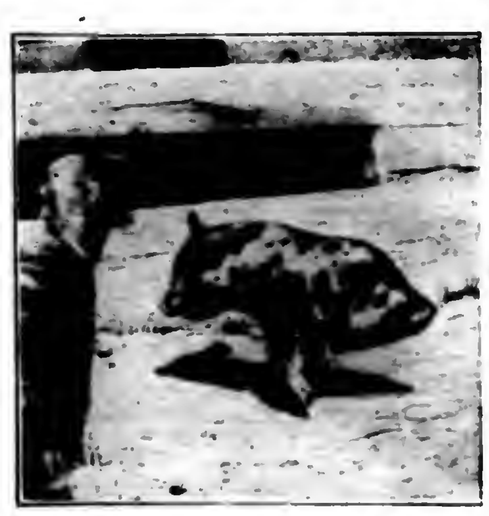
"Therefore be it Resolved, That it is the sense of the Directors of the New York State Federation of County Sheep Growers' Associations, Inc., in session at Syracuse, N. Y., this 8th day of July, 1920, that a New York State pool for 1920 is advisable, and to that end we recommend the selection of a Wool Pool and Marketing Committee with authority to secure pledges from the different county associations, select a central warehouse, engage a wool pool and sales manager and perfect plans for assembling financing and selling such wool."

Committee in Charge

It is not the easiest sort of a job to assemble New York State wools and sell them thru a pool, because there is a great variance in the kinds and quality of the State wool clip. However, a committee appointed by the president of the State Wool Growers' Association is diligently at work formulating plans which will soon be made available to the county associations. These plans will take up the method of handling the wool pool. The committee will want to know the approximate amount of wool each county will consign and will probably suggest a method of assembling, grading and packing the wool. Suitable warehouse space must be contracted for and a sales-manager employed who will take active charge of the plans and look into the details of the final arrangements between growers and the central pool. The committee which will work out these details is composed of the following men: A. W. North, Delaware County; J. C Cottrell, Washington County; S. E. Budd, Wayne County; A. W. Mason, Tioga County; E. L. Moody, Ontario County.

Some Counties Have Sold

A few county associations of the State have sold this year's wool for their members. In Schuyler County where a direct sale was made, an announcement by the county association's secretary states that the county wool averaged about 42½c a pound. In most instances, however, the individual grower has his wool stored on his farm. He is waiting for the market condition to improve and has no high rates of interest to pay, as do some of the growers who have consigned their wool and received high advances from commission men. It is stated that the grower has to pay 8 percent on these advances.—E. C. W., Cayuga Co., N. Y.



A Freak Two-legged Pig

TWO-LEGGED PIG

Near Hazard, Ky., a small brood sow farrowed five pigs. One of these was a freak, or monstrosity, without any hind legs at all. The pig has no hip bones and practically no hams at all. It is of average weight, size and with all other parts normal. It is now over a month old, eats with the other pigs and successfully finds its place at its mother's table with the other pigs.

The picture shows it walking. It is not very successful walking on its two legs. However, it can balance itself while walking but not when it stops. It is very interesting and many folks come from all parts of the community to see it.—A. E. McGuire, Vocational Agriculture, Hazard High School, Hazard, Ky.

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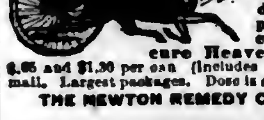

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MINERAL HEAVE COMPOUND In use over 50 years

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Large Type Reg. Berkshires of all ages for sale. Select a breeder from a large litter. Pay when you see stock. No cash in advance.
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BRED SOWS AND GILTS. I have some very fine Berkshire sows and gilts bred to farrow Sept. 1st. Also a few choice open gilts. Anselm B. Kirsch, Highland Stock Farm, Nicktown, Pa.

Special Sale REGISTERED DUROC SOWS bred for Summer farrow, $65.00 each, registered and express paid.
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Quality Growthiness Prolificacy
We guarantee satisfaction.
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REG. DUROCS Large size, heavy bone, best blood lines, prices reasonable. Satisfaction guaranteed.
JOHN W. COX & SON, New Wilmington, Pa.

O. I. C. PIGS 8 weeks old, registered free, to be delivered in September. L. B. Silver's strain. Satisfaction guaranteed.
THE OAKS DAIRY FARM, WYALUSING, PA.

Reg. Berskshires with size and quality; long bodies, good in back and legs. Spring pigs and bred sows.
NEARBY STOCK FARM, POTTSGROVE, PA.

CHESTER WHITE PIGS.—A fine lot now ready to ship, either singly or in pairs.
R. L. MUNCE, Canonsburg, Pa.

Chester Whites Boars and Sow Pigs. Bred Sows. Collie dogs.
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Nelson's Berkshires 4 months old pigs, $25. With size and quality; guar'd to please. W. D. Nelson, Jr., Marshallton, Del.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, Center Valley, Pa.

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REG. O. I. C'S, all ages. Open and bred gilts at prices to move them.
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REG. LARGE ENGLISH YORKSHIRES. Short nose, good length, prolific and quick-growing type, fall pigs for sale. J. Homer Reams, Luthersburg, Pa.

CHESTER WHITES Hardy, prolific, well bred.
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POLLED HOLSTEINS
registered in the Herd Books of the Holstein Friesian Association of America. Herd sire out world's record senior four-year-old.
KEYSTONE BEAUTY PLUM JOHANNA
No. 161646
At 4-10-20, 365 days—25787.5 milk: (4.02%) 1294.7 butter
At 3-3-23, 365 days—22496.8 milk: (3.94%) 1108.9 butter
2 years under full age—48284.1 milk: 2403.6 butter. The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year.
Bull calves $100.00 and up. GEORGE E. STEVENSON & SONS, Clarks Summit, Pa.

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150 reg. cattle, 20 reg. bulls, 100 high grades, a carload of any age that you may want. Holstein heifer calves $20 each express paid in lots of 5. Over 2,000 satisfied customers will send list in your states for reference of square dealing at SPOT FARM.
J. C. Reagan, Tully, N. Y.

Poultry

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Reds, Rocks, Leghorns, Minorcas and Broilers at rock bottom prices by Parcel Post. Prepaid and safe delivery guaranteed. Our 11th year. Catalog free.
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Wool-producing breed. For information address
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REG. BIG TYPE POLAND CHINA PIGS, Hampshire Down Sheep, all from the best blood and priced right. C. E. SECHLER, MARKLETON, PA.

Chester Whites and HAMPSHIRE SHEEP [illegible] you want. We can please you. TWIN BROOK FARM, Neville, Pa.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Contagious Abortion. — A few months ago I assumed charge of a dairy and found the herd infected with contagious abortion. At first I thought the only thing to do was to sell the infected cows and buy other cattle. I recently received information from a man whose cattle had this contagious abortion. He said he held back his infected cattle six months and then bred them and had no more abortion. If I can save my infected cattle this way I wish to do so. Please give me information, thru your valuable paper as soon as possible, if this contagious abortion can be removed from my herd by the aforesaid plan, or in any other way, without being compelled to sell my infected cattle. F. N. B., Bound Brook, N. J.—It will be a mistake for you to sell any of your cows unless they prove to be barren or are unprofitable for dairying. Many infected cows, even without treatment, abort but once; others a second time, usually carrying their calf to the seventh or eighth month. Few cows ever abort a third time. The infection is taken up by the susceptible mother, thru the digestive tract, the casual germ contaminating the food and water; also, thru the genital organs, which may become infected by the stable litter, manure, buckets, milking stools, halters, sponges or other stable utensils. The bull is also a carrier of the infection.

The fundamental principles underlying the control of infectious abortion are the same as for the eradication of any infectious disease, separate the sick from the healthy animals, disinfect the premises, burn or boil or deeply bury the dead calf and afterbirth. Cows which are about to abort, or have aborted, should be removed from the rest of herd if it is possible to do so. If not, leave empty stall between her and the well cows. Use disinfectants freely to stall floor and walls where she stood. Cows which have aborted and are still discharging, should be washed out with one part Lysol and 99 parts water two or three times a week until vaginal discharge ceases. In most cases this treatment is unnecessary. Another great mistake is in the removal of a clinging afterbirth. If it fails to come away in forty-eight hours take away what you can easily without injuring the inner wall of uterus. I also caution the operator to have clean hands and use little, if any, force. Don't breed the aborting cow for ten or twelve weeks. Keeping together the herd will surely lead to a more rapid eradication of the disease than if the infected animals are sold and replaced with new, susceptible ones. No cows should be added to the herd with any abnormal vaginal discharge, and no bull should be patronized unless he is clean.

Punctured Foot.—Have a mare with punctured foot. Wound failed to heal. Now there is a hole under fetlock which discharges fluid and pus, much like joint oil. A. N. T., N. Y. Swab out wound and paint surrounding edges of sore with tincture of iodine every day or two. Apply one part powdered alum, three parts oxide of zinc and four parts boric acid to sore twice a day. Her recovery is doubtful.

Are You Getting All the Milk She Can Produce?

As long as a cow gives down a fairly good flow of milk you may think she is producing to her full capacity. But is she? A cow is a wonderful milk-making machine, but she must be properly fed to produce a good profit for her owner.

International Special Dairy Feed
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International Special Dairy Feed is made of high grade materials, each one of which contains certain elements necessary to the general good body condition of the animal. These ingredients are scientifically mixed in just the right proportions to produce the desired results —the most milk, the best condition and longest life.

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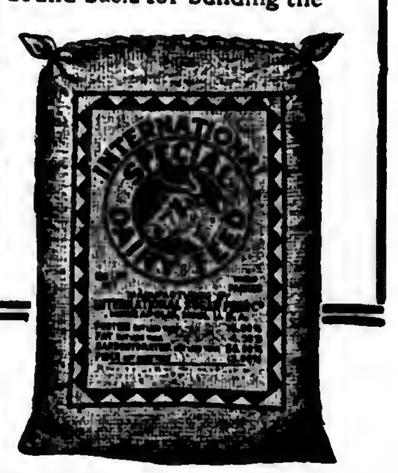
Grass stimulates the milk flow but has no sound basis for building the body and maintaining milk flows at capacity indefinitely. Feed International Special Dairy Feed with summer pasture and see how big milk flows can be maintained all year round.

Every cow in your herd must earn her board and a profit for you or go to "beef." Start feeding International Special Dairy Feed now and give the poorest cow in the herd a chance to make good. Start with a trial ton at once. Order from your dealer today. If no International dealer is near you, write us and we will see that you are supplied promptly.



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SPECIAL OFFERS OF PURE BRED LIVESTOCK
JERSEYS. Mixed car load of females and several young bulls. Register of Merit and Cow Testing Association Records.
HOLSTEINS.—Several Bulls, 6 to 10 months old, A. R. O. dams. Excellent Breeding
SEVERAL YOUNG BULLS of good breeding at reasonable prices.
GUERNSEYS. Herd dispersal, largely imported blood.
AYRSHIRES. Few young females.
All of the above are pure bred cattle with proper registration papers. Address inquiries to
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TIOGA COUNTY PENNSYLVANIA----THE HOME OF HEALTHY HOLSTEINS
PUREBREDS AND GRADES
4— herds under State and Federal supervision and [illegible] more on the waiting list.
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An organization backed by 100 paid memberships for the purpose of assisting its members in producing
GOOD HEALTHY HOLSTEINS
We invite inspection. Address all inquiries to
PAUL P. KORB, Secretary. WELLSBORO, PA.
TIOGA COUNTY HOLSTEIN BREEDERS' ASSOCIATION

MID-SUMMER SALE OF AYRSHIRES
A fine selection of heifer calves, bred heifers and young cows in this sale. Excellent opportunity to found or build up your herd with animals from the best breeding backed by large record. Prices reasonable. Tuberculin tested, no reactors.
CRESTMONT FARM, SUNBURY, PA

MAPLE LAWN HOLSTEINS

High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland, my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.
C. W. Ellis, Jr., Maple Lawn Farms, Cortland, N. Y.

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We buy and sell the very best cows obtainable and select trade from buyers who want the best cows weighing from 1000 to 1500 lbs., some are fresh, balance from 1 to 10 weeks away. If you want the best we want your business. And we can please you. We buy and sell continually and have 200 to select from.
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OF CORTLAND, N. Y.
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We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred, healthy bulls from a clean, Tuberculin Tested Herd at reasonable prices. King of the May, Dolly Dimple, Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees.
WAWA DAIRY FARMS, 22 S. 32nd St., Phila., Pa.

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Purebred registered and high grade. Price $20 up. Splendid individuals and breeding. Write us your requirements. BROWNCROFT FARMS, McGraw, N. Y.

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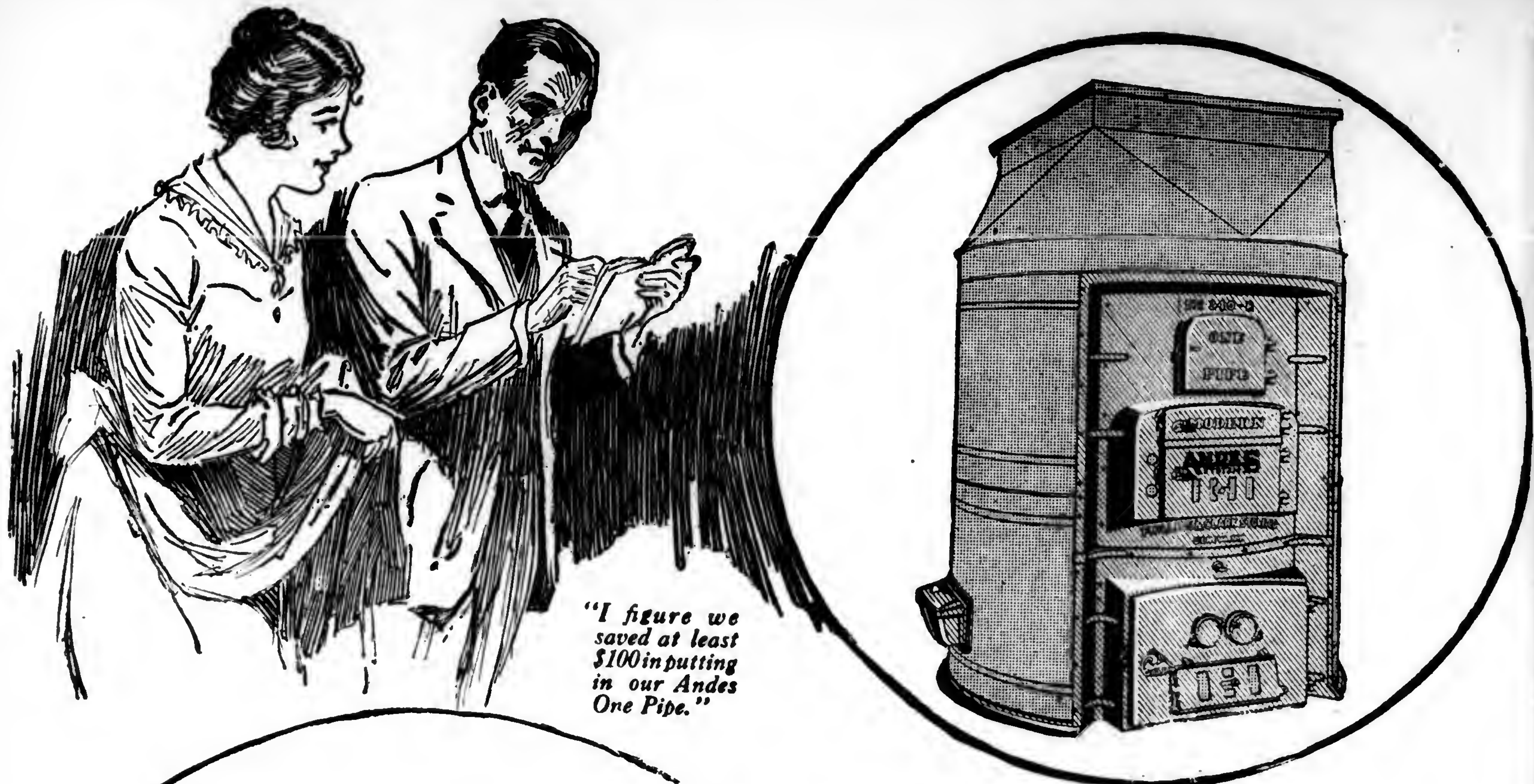

"I figure we saved at least $100 in putting in our Andes One Pipe."

Give a thought to furnace time

WHO said ninety in the shade? Hang the thermometer! That dope's all wrong. It's a snappy September morning and no fire in the house. First frost came in the night and there's a chill that sets your teeth jumping. We'll say it's cold! If only you'd put in your Andes furnace a month ago, Oh boy, how simple it would be to build a little fire and give that chill a knockout in no time at all!

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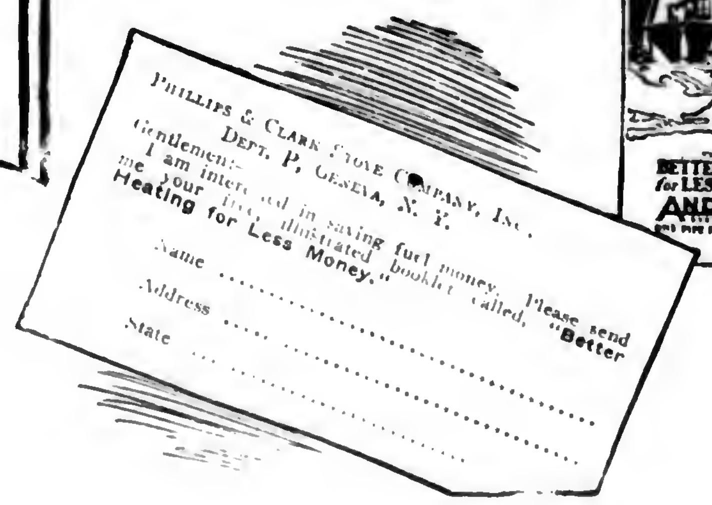
ANDES
ONE PIPE FURNACE



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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880
PUBLISHED WEEKLY

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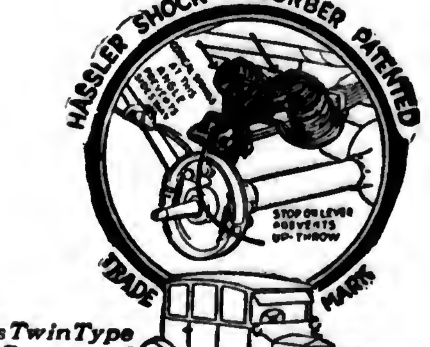
Volume 48
PHILADELPHIA, PA., SATURDAY, AUGUST 14, 1920
Number 7

HASSLER SHOCK ABSORBER PATENTED
CONICAL SPRINGS AT THIS ANGLE PREVENT SIDESWAY
STOP ON LEVER PREVENTS UP-THROW
SOFT AND RESILIENT ACTION DOWNWARD
TRADE MARK

For Ford Passenger Cars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This Twin Type for Front and Rear of Ford One-Ton Trucks

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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880
PUBLISHED WEEKLY

The Lawrence
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Volume 48 PHILADELPHIA, PA., SATURDAY, AUGUST 14, 1920 Number 7

Fattening Poultry for Market

How to Care for and Feed for Quick Results---Michael K. Boyer

No frame-growing foods are needed at all when fattening poultry for market. The point is to increase the amount of flesh and fat, and this can be brought about by giving a surfeit, and by preventing exercise, which tends to the distribution of heat and prevents the accumulation of fresh bodily substance.

For fattening purposes foods that are fatty, starchy and sugary are recommended, such as the residue of fat meat, Indian corn, potatoes, rice and milk. Oatmeal given with milk is a very good diet, but there is a tendency to whiten the skin, which may be an objection in market.

Old hens may be quickly fattened by placing them in a moderately dark room and feed a mixture of cornmeal and wheat middlings, mixed somewhat thin. Supply them with plenty of pure water and all the food they will eat up clean. In about two weeks they will be ready for market.

Fowls to be fattened should be confined in small yards or in coops or crates, especially adapted for feeding. The object in keeping them in confinement is to prevent their forming muscle and sinew, which would occur if allowed to run at liberty.

Formulae for fattening that are recommended are as follows:

1. Bran, cornmeal and oatmeal, equal parts, mixed with skim-milk, fed three times a day.

2. Buckwheat flour, pulverized oats, cornmeal, equal parts, mixed with buttermilk.

3. Equal parts barley meal and oatmeal and one-half part of cornmeal, mixed with buttermilk or skimmilk.

4. Barley meal, two parts to one part each of cornmeal and buckwheat flour. This is a favorite French mash.

It is well to add a little salt and coarse sand to any of the above mixtures. Do not salt too heavily—just about what a cook would use "to taste."

A superior flavor is added to the carcass by mixing or moistening the mash with milk, instead of water.

Some of the New Jersey poutrymen fatten their stock on sweet potatoes and cornmeal. The potatoes are cooked and just before removing from the fire the cornmeal is added. The ration is fed when cold. Generally a pound of corameal is added to half a peck of sweet potatoes.

A fowl that does not readily respond to proper fattening foods has a constitutional weakness and needs attention.

A Primitive Instinct Makes Everyone Enjoy Camping in Summer

Catering to the Market

Notwithstanding that some of the whims and fancies of the market may be ridiculous, yet it is the wise poultryman who caters to them. In making sales, appearance is a factor. A plump, neatly dressed carcass, free from pin feathers, will attract the eye of the buyer. While quality of flesh is not necessarily guaranteed by yellow legs and yellow skin, the American market calls for it and should have it. He who quarrels with the demand or the market or tries to reform it, is working in his own light.

Poultry culture, like any other business, must be regulated according to demand. It is a proven fact that, for table use, the dark-legged breeds, or at least those with legs of a color other than yellow, are the best. But the American epicure does not seem to think so and consequently the poulterer must produce just what the public wants, even though they have it in their power to furnish something superior. These same epicures will laud the quail, the pheasant and nearly all wild birds of the forest and field for the delicacy of their flesh, notwithstanding that these wild birds have dark-colored legs and white skin.

The carcasses that show clean, yellow skin, with unmistakable evidence of fine grain, and good thickness of breast and sides of breast bone, are the ones preferred by the American housewives.

The poulterer who markets only plump, juicy broilers and attractive, delicious roasters, is the man who is making the money. Fat chickens are in demand and those with full, plump bodies and limbs do not remain on the market very long. The majority of chickens marketed are entirely too lean and lanky.

The business of marketing live poultry in America has assumed great proportion. Live poultry, as a rule, commands better sales in market than when dressed, especially in the case of spring chickens that are apt to have a scrawny, bony appearance when dressed.

In shipping live poultry, distance from market should be taken into consideration. It is not advisable to ship over 300 miles, as the shrinkage is heavy and, as a rule, so many crowd their coops that the loss at times is considerable. Shipping coops should be high enough to permit the fowls to stand upright without bending their legs. When large coops are used there should be partitions, so that if the coops are tipped all of the birds are not thrown to one side.

Most of the loss in shipping live poultry is due to suffocation, some crates arriving in market in the hottest days containing three to a half-dozen dead birds. During the hot season not more than 100 pounds of adult birds should be placed in a coop, but in cold weather 120 pounds may be allowed.

Shipping should be guaged so as to reach market from Tuesday to Friday. As receipts increase toward the end of the week, enough stock is left to supply the trade on Monday, and late in the week dealers prefer to sell the fowls at a sacrifice rather than carry them over Sunday and have the trouble and expense of feeding them. Monday, moreover, usually is a poor day to sell poultry.

In shipping spring chickens, when small, 50 to 60 pounds may be sent in the regulation coop, and when large, 70 to 90 pounds. It is best to ship hens, pullets, cockerels and cocks in separate crates, but when a shipper has not sufficient birds, mixed lots may be sent.

Just before shipping, the birds should be fed and watered liberally, whole corn and wheat being the most sustaining foods. If the trip is to be a long one it is a good plan to provide a few hands full of grain in a corner of the crate.

Most of the live poultry is shipped from April to November. Occasionally the price for live poultry is as high as dressed stock. At such times it is a waste of time to dress birds for shipment. This is especially advisable when the market is near at hand, for there will not be much shrinkage on short shipments. Market old hens before they go into molt.

FARMERS, THINK STRAIGHT

Farming is a business and farmers as a class are faced by a serious situation at the present time. More than ever before they must think straight and co-operate effectively; especially in this presidential year, when new and complex issues are before the people.

Two-thirds of the people of this country live in cities and most of them are profoundly ignorant of and unconcerned about the farmer and his problems. Indeed, many of them are actually antagonistic to him. Witness their frantic efforts to lower the prices of farm products by boycotts, housewives' leagues and various other ways, while their own wages are constantly being boosted.

Just the other day the newspapers featured the fact that there was an overproduction of milk and many large condenseries must close up and milk must take a drop. Not a word, however, was said about the dairyman and the desperate situation he is facing. When the possibility of his selling his herds and quitting the business is raised at once the cry goes up that he is unpatriotic and mercenary and must continue to produce milk, even at a loss, so that the people will not starve and the cities can continue to function.

It is the same way with all other lines of farming. Eggs are boycotted and the price pushed down; potatoes, onions and other vegetables go thru the same process and the producer far from making a profit on his investment is playing a losing game.

Several other factors combine to make the situation ominous. Our young men are leaving the farm for the city at an alarming rate. High wages, short hours and the glamour and tinsel of town life attract the young men and they are leaving the soil by the thousands. The Eastern States, New York and Pennsylvania especially, are being industrialized to an alarming extent. Factories of every description are springing up everywhere and are draining the country of labor. The result must be an underproduction of food, with consequent hunger and perhaps famine. There is but one thing to do to remedy the situation, and that is to make farming as profitable as other lines of endeavor. The prices of farm products must be high enough to cover the cost of production and give the producer a profit on their investment. Prices of manufactured goods show no indication of coming down; on the contrary they are ever mounting. Why should not farm products be placed on the same price level?

Making farming protfiable will insure ample production and will assuredly solve the farm-to-the-city movement. Close co-operation and effective action are needed to accomplish this. More than ever before, farmers should study the issues before the country; should read between the lines and use their ballot wisely and well.

—Leonard F. Strickler.

A Tractor and Disc Makes Short Work of Corn Stubbles

A FARMER DREAMS

In these trying days of dissatisfaction and unrest, when men seem almost to have forgotten their fellow-men in the mad scramble for higher wages and shorter hours, it is refreshing to ease our tired body in the most comfortable rocker, light our pipe and try to let mind and body rest.

Bodily we rest, but as the smoke curls up from the pipe the mind begins to work. We picture the past years of peace and plenty when we of the farm could, at least, make a living and get a little willing help when needed. Profits were not large, yet by modest and careful living the family could be reared and a small sum laid away each year. Generally, in order to do this, we had to allow no compensation to the children and the labor of the good wife in the barn and in the field had to be thrown in as a good measure on top of her arduous household duties.

Of course, occasionally, we took the family for a day's outing, gave the children a pittance to spend and got the wife a little article of luxury she had long wished for. Aside from this the family received no compensation and their labors were not counted as a part of the cost of production. Our family grew up around us, worked hard, and we felt the loss of their help and had a heartache as one by one they answered the call of the town or city with its appealing bright lights, attractive shorter hours and tempting compensation.

With the coming of the World War the last of the flock was taken by the draft and mowed down by the grim reaper on foreign shores. How we missed his cheerful presence and felt the loss of his help, we cannot tell. Hope, faith and patriotism bore us up and on, for little or no help was obtainable and that offered was for the most part the unskilled, high-priced and indifferent. We saw prices mounting on every hand, the over-thrifty made millionaires in a day, and our little store of savings no longer was growing but was slowly dwindling away.

To assure us that a hungry world would buy our wheat and not let it go a-begging in our bins, we had a swivel-chair policital price placed upon it. We who always asked little were prevented from asking that. In spite of this we shouldered our cross, struggled thru with the harvest and were financially shot at and wounded at the mill-door where grain was not bought on the Government price and grading, but only sold on that basis. Millers, we learned, could buy in the market they found best and by co-operation they fixed local market prices that gave them the returns of the over-thrifty. But the news that crushed us was from foreign fields, as it was there our hope was buried.

Who can forget the last day at the old homestead? How it hurt to see the things we loved so well scattered in every direction with each tap of the auctioneer's gavel. At the close of that busy, trying day, when all was sold and we were about to depart, it seemed that it could not be, we must surely awake and find it only a dream.

At first how strange it seemed living in a large city, working only eight hours a day in a large factory at undreamed of wages and being classed as more patriotic than before. How odd it seemed to be soon classed as a skilled mechanic and to continue to receive the frequent increases of wages. How different the attitude of the men toward their work. The passage from Scripture, "As ye sow, so shall ye reap," begins to have a new meaning to us as applied to the farm. All might have been changed had we sown the seeds of good management by rating ourselves on the farm as skilled mechanics, working eight hours a day, with time and half-time for overtime and double-time on Sundays. How much greater would have been our cost if we had paid the family the rate of wage prevailed for service such as they performed. What a change we would have made in the selling price on this basis of cost and how differently would we have prospered. By not properly counting our cost we underbid ourselves and neighbors, drove our children and hired help away and eventually were compelled to leave the farm ourselves.

The pipedream is over and on retiring we wonder if the return of help to the farm will not see the adoption of new and better plans and the placing of the farmer on a new and higher plane. —W. Edwin Druckemiller, Northumberland Co., Pa.

THE SHORT COURSE AN EYE-OPENER

"Well, Jim, did you get anything out of the course? This was the kind of a question that was asked of me when I returned home after spending eight weeks at the Pennsylvania State College winter short course.

To such questions I can heartily answer that I have a better idea of what practical farming is in this present demand for high-class products.

It was not time enough for me to gather a great deal of information, but it surely was an eye-opener, for I have learned many things that I had never known and the course has created in me a desire for greater knowledge about purebred livestock, better seeds, more successful methods in producing dairy products. I have learned, also, when soils fail to produce optimum crops, how to apply fertilizing material that is best suited for the desired crops.

When I was yet on the home farm I had heard occasionally of purebred livestock, but after attending the course I have made up my mind that a good purebred will not consume any more feed than a scrub and, if the right kind, in the end will be worth much more, so why not raise good stock to begin with and then improve in as many ways as I can?

With the ideas I have gained at Penn State and the experience I had before going there I am in a position to gather much more valuable information. I am working on a dairy farm in one of the most progressive dairy sections of Pennsylvania, with an up-to-date farmer who tries hard to make every blow count. The owner, who is a graduate of Penn State, is an energetic young farmer who keeps a herd of thirteen cows, seven of which are purebred Guernseys. He also has four purebred Guernsey heifers and a well-bred sire that has 75 percent of the blood of Beda's May King, a noted Guernsey sire.

I find that each day I want more to have a farm of my own so that I can make further use of the ideas of successful farming instead of the prevalent idea that the farm is not the place for young people. I like outdoor life and farming fills the bill.

I got my idea of taking this course from taking part in an acre corn-raising contest four or five years ago. Some people think that the boys' and girls' club work is all "bosh." Well, I cannot agree, for from being in a boys' and girls' corn club during the season of 1915 in our county, I won a second prize, and Professor Clemmer, who had charge of the club work at that time, told us of the short course and from that time on I dreamed of the short course and planned on going to Penn State for it. In addition to the dairy work I took great interest in the raising of good seed corn and in the selection of good ears. The loss in using poor seed corn can be figured in dollars and cents these days, for a single poor ear, if it were planted instead of a good ear would cause a loss of ten bushels of corn in the yield of an acre.

So, altho I have just finished this course, I can already see where it was easily worth the eight weeks of time, and where the $120 spent in taking it will earn me a high rate of interest in my future farm life.—A Pennsylvania Boy.

A woodlot without a good stand of young trees coming on to take the place of the old ones is like a family without any children. What is going to become of it?

Ten 10,000-pound cows will produce as much milk as twenty 5000-pound cows; it takes only one-half as much time to feed five cows as ten; besides, one man can milk ten cows while it takes two to milk twenty.

Oil The Wheel That Squeaks

Modern Business Methods Make the Farm Prosper---W. Edwin Druckemiller

There is an old saying to the effect that "the wheel that squeaks is the one that gets greased." There is truth and logic in the saying, else it would not have survived to be handed down. Upon the mind of the successful man you find such sayings indelibly stamped. They are ever with him and it is by their practical application in everyday life that he is enabled to reach the goal of his ambition.

Do you, as a practical farmer, have an ear keenly alert to catch the first tiny squeak in the operation of your machinery and are you annoyed at the sound and quick to apply the remedy? Perhaps you are the type who harken to the squeak but find it music to the ear, or, may be, you never hear it at all. If you are of these latter types this article is written particularly for your benefit. You are of the "nobody-at-home" class, dead to the world, lazy and shiftless, a drag to your wife, a bother to the community and not worthy of the title of a farmer. You ought to be ashamed of yourself! It is time you wake up, for you are years behind the times. Why not be a man? You can be if you will!

The squeak of the machinery is important to look after, but this is not the only squeak on the farm. After the ear is sufficiently trained the eye will supplement it and it is possible to be equally cognizant of the danger signal even though it does not take the form of a rasping noise or an electric gong.

A certain well-known firm used to say: "Tell me what you eat and I will tell you what you are." I would like to rearrange this to say, "Let me see your farm and I will tell you what kind of a farmer you are." Your character is written all over your farm and any keen eye can read you like an open book. You are introduced and known before you are seen. If you wish to be known for what you are, let your works record it properly. Don't be misrepresented.

A Pair of Fine Cheviots

We hear much these days about abandoned farms, shortage of help on the farm, poor prices for farm products, high prices for seeds, tools, etc. It is no doubt all true; but what does it mean How shall we interpret this handwriting on the wall? It has, undoubtedly, a certain and definite meaning to us. What is it? The day of the Prophets having passed, we can best determine the meaning by reasoning from cause to effect. The cause and effect being known, it ought to be possible to suggest the remedy, or, in other words, apply the grease.

Suppose we take a day off and pay a visit to two farms that can be found within ten miles of most any place. The first stop will be made at Sam Hinkle's place, owned and farmed by Sam. We'll not meet Sam, but you can judge him for yourself. Swinging in on the road to the house and barns, evidence is seen of poor crops, undersized and thin on the ground; no fertilizer; the potato patch and orchard bear evidence of the lack of spraying, and the character of the cultivating and pruning is questionable. The corn is not so bad, but a trifle weedy and not a good stand.

Hogging Down Corn With Cracked Soy Beans in Self-feeder to Supply Protein

Fences are in bad repair and keep company with the house and other buildings in this particular. There is an unsightly junkpile near the barn, tall weeds are growing up around the barnyard and the cows stand knee-deep in manure. From the looks of their bodies they are dunghill grades. They might be something else, but they are so disguised in appearance that recognition would be well nigh impossible. The interior of the barn is worse than the exterior, as feed is scattered about, cow and horse stalls are dirty without exception and the side walls and ceiling might never have been cleaned. There are a few modern fixtures installed, but by contrast they are as pearls in a hog's snout.

The decrepit pigs wallow in slime and eat their own filth. Chickens roam at large, eating at the grain and laying where they will. Tools and implements in various states of repair and ruin are scattered about, a prey to the elements, and never to be found when wanted. Inefficiency, sloth and waste glare with baleful eye from almost every direction. We are glad to beat a hasty retreat. We would not care to meet Sam and we could only pity his wife. You don't think this farm pays? Neither do I. In fact we know it doesn't. How could it? Such an owner has no ear for the squeaks of tools, stock and fields. He knows nothing of modern farming as written in books and magazines and as explained by his county agent. He has no idea of the keeping of costs and if he were rated by the hour it would be at 30 cents or less, the price at which, I understand, the Government rates the farmer in figuring his cost for information to the public. Therefore, he is properly less than a laborer.

I don't know what you would call him. His children all left home as he did not count their help as part of his cost and it was therefore impossible to give them other than their board and clothes, and hardly that. No hired help is available, as he could not pay a laborer when he is less than one himself. He will not co-operate with other farmers in buying or selling, as a result he sells at the worst time and at any price offered. When he buys his supplies is there any wonder the prices look high to him, as he is short of money and purchases in small lots with a premium of price and at a discount for quality? We predict that this farm is in line to be abandoned.

While meditating on the fate of Sam's farm we have traveled a short distance to a neighboring farm and it attracts our attention too. It looks like a real, sure-enough farm, all dressed up for Sunday with white collar and tie. The buildings, as seen from a distance, look modern, freshly painted and attractive, standing out as a fit setting for the green fields and well-trimmed orchard and shrubbery. The fencing is in good repair and not grown up with weeds. The place has a wholesome atmosphere and invites closer inspection.

Turning in at the main drive it appears that the prospective yield from the fields will be greater than we first thought. The stand is thick on the ground and looks fine to the eye. At every glance the evidence of intelligent, well directed work is observed. Cleanliness and honesty are granted and the stamp of peace and plenty is recorded. The house has a stay-for-dinner look about it and the close-trimmed, shaded lawn, with its bright planting of flowers and shrubbery, is cool and pleasing. You don't expect to see a litter of tools and a pile of trash around the barn on this farm. It is certain that the implement shed to the right is housing them all, arranged in orderly manner, well oiled and ready for the field at a moment's notice.

The barnyard is well laid out and clean and the cows contentedly chewing their cuds give ample evidence of the purity of their breeding. If you were not invited to the house, and necessity required, you could take your meal in the barn without the slightest offence. Is this not ample evidence of the kind of a farm you are on and the kind of a man John Gordon is? You wouldn't expect to find John getting up in the morning at the same hour that Sam puts in an appearance; neither would you find them together early in the evening discussing politics and what-not over a glass of near-beer at the handiest grog shop.

John Gordon stands high in his community, is prosperous as a farmer and very much a man. You might say: "Yes, we could do that too if some one gave us the richest farm in the valley and a pile of money to run it with." Not so in in this case, however. The details are: John Gordon started as a poor young man. Plenty of hard work and careful saving saw the farm acquired. A keeping abreast of the times gave the necessary efficiency to produce the result as seen today. The details are that books showing the cost of production are carefully kept. This points out unproductive crops and animals which are eliminated. John rates himself higher than a skilled mechanic working eight hours per day with time and half-time for overtime and double time for Sundays. His children are all at home and are paid according to the prevailing wage for labor such as they perform. Hired help is secured in competition with other industries and an effort is made to make life pleasant for them.

The market is studied for the best time to market the grain crops, and tools, seeds, fertilizer and feed are purchased in co-operation with other farmers in large lots and at the time of the year most favorable to the buyer. The hogs and cattle are largely marketed as breeders, as they are pure-bred, well developed and backed by records. The milk is not sold on the open market but is sold at a premium for quality to select local trade, or in a distant city market.

The same methods are applied to other stock that is raised, and efficiency is the password. If we would prosper on the farm today, see a return of help and a taking up of the abandoned farm, it must be by increased efficiency and the application of modern business methods. Our products are necessary, but their cost, plus a profit, must be realized. Grease your squeaks and you will plug your leaks.

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Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Can it be Put Over?

THE MARKETING conference which was called together in Chicago the latter part of July by the Farm Bureau Federation considered some of the biggest co-operative marketing plans that ever came before a farmers' gathering. While it is proposed to give attention to all the major products, including livestock, most of the time of this meeting was spent in the consideration of the marketing of wheat: The plan presented by an attorney from California seemed to find most favor and a representative committee was appointed to work out the details. It is not expected that a workable scheme can be effected before 1922. Briefly stated, the plan discussed is as follows:

1. A national marketing company organized on a non-stick, non-profit basis so as not to conflict with the anti-trust act. This will be formed after the nine principle wheat-growing states have been organized with at least 51 percent of the growers signed up under a five-year contract to deliver all their wheat.

2. In case of over-production in any year it will be necessary to store the surplus and cut the acreage the next year.

3. The interests of the public are to be protected by including on the board of directors, with full voting powers, representatives of the Department of Agriculture and the Federal Trade Commission.

It may certainly be expected that, should the committee report favorably on the above plan there will be sent up a mighty protest from grain dealers and middle-men in general. Efforts will be made to scare the public into opposition to the passage of the Capper-Volstead Act. Trade papers have already called the plan the "greatest monopolistic scheme ever proposed." There is little doubt that the passage of any law permitting collective bargaining will be made harder to get thru the next Congress because of this frankly discussed proposition.

The question which farmers will have to make clear to the public mind is that their co-operative enterprises are not intended to be a close monopoly for the purpose of restraining trade or limiting production and thus increase the cost of living for selfish enrichment. The public is usually fair-minded when it understands a problem and if it can be made to realize that the continued production of market food depends upon a fair degree of prosperity on the farm, we believe it will approve of such business methods as will insure it. Cost plus a reasonable profit is a not unreasonable demand. In fact the Government has approved it and guaranteed it in the case of railroads.

The plan outlined at the marketing conference is a bold one. But conditions have reached a point where bold projects are needed. Farmers have discussed the necessity of co-operation for two generations and some progress has been made, but only a beginning. All well-informed people agree that the great need in agriculture today is greater economy in production and in marketing. They also agree that success in either line is dependent upon close and extensive co-operation—co-operation so close that it will necessarily have the earmarks of a monopoly. Will farmers be able to allay the public's fears on this matter so that Congress will pass legislation permitting it? If they can satisfy the public will they be able to agree sufficiently to devise a workable and permanent plan of business?

The Inter-Church Failure

INDICATIONS at the present time are that the much-heralded uniting of church activities has fallen thru. It is altogether possible that mistakes of judgment were made and that too great a dependence was placed on what an immense sum of money would do towards Christianizing the world. Whatever elements of weakness there were in the original plan it was a move in the right direction, since it promised a plan by which churches could become better acquainted with each other and thus dissipate whatever narrowness and jealousy now exists between creeds. One of the most disconcerting features about the collapse of the movement is the charge that big business was the cause of its failure. That funds as well as approval were withheld by men of wealth because the plan proposed a thoro study of business practices and social conditions. The New York World in a lengthy article makes this charge directly and says that the big interests serves notice that the Church must concern itself with heavenly things and leave the things of the earth alone. The leaders of the movement say that the work will go on but under a greatly modified plan.

Making Cider

WE HAVE received a number of queries this summer which suggest that there is a belief more or less prevalent that the prohibition law prevents farmers from making and selling cider. This is not the case. Farmers can make cider the same as usual and sell it also so long as it is sweet; that is, before it has fermented. If sold for beverage purposes we believe there is a war tax to be paid. The internal revenue officer should be consulted on this point. It is also legal to make and sell vinegar as in the past. In doing this be sure that the vessel is marked pure cider vinegar and that the name and address of the maker and seller appears also. We want to throw out a word of caution to those who in the past have been in the habit of making hard cider and passing it out among their friends. Such practice is in the same class as selling or giving away other alcoholic drinks and the violator is open to the same punishment.

Good Work

WE HAVE received more reports of the formation of breeding clubs and county livestock associations during the past year than we received in the previous five years. This is a most encouraging condition. Nothing will develop the livestock of a community so well as co-operative activities. These breeding associations not only create a greater interest in the subject but they also provide an opportunity for acquiring a knowledge of the work of breeding. It makes the introduction of high-class animals into the neighborhood much easier and also enables breeders to sell stock to a better advantage. Every such association should make it a point to secure the advice of the best authorities in their particular line from time to time. Successful breeding is a fine art and it cannot be done on a hit-or-miss plan. Except for a few individuals and a few communities, the East has been slow to go into the business of producing pure-bred animals. We hope the present tendency presages a steady and rapid development in this work.

Our Washington Letter

A large delegation of farm leaders will visit Senator Harding and Governor Cox during the fall meeting of the National Board of Farm Organizations at Columbus, Ohio, the first week of September. The farm organizations want a clear-cut statement from each candidate indicating his policy toward agriculture during the next four years if elected President.

At this meeting some consideration will be given to the nation-wide farmers' co-operative grain and livestock marketing movement which had its inception at the recent meeting in Chicago, called by the American Farm Bureau Federation for the purpose of studying the marketing problem.

Believing that Mr. Sapiro's plan of combining all the farmer owned elevators into one extensive grain selling agency for the purpose of controlling the supply and in large measure the market is a question which needs much investigation and study, the National Board of Farm Organizations and Farmers' National Grain Dealers' Association, with more than 4000 elevators under their control, decided to appoint a committee of eight independently of the committee of seventeen appointed by the Farm Bureau Federation to investigate the proposition from all angles.

* * *

J. W. Coverdale, of Chicago, secretary of the American Farm Bureau Federation, was in Washington recently on his return from a trip to New England, where he attended the organization of the Rhode Island State Farm Bureau Federation. He reports that the New England Farm Bureau Federation is conducting a successful membership drive on a $5 and $10 basis, the same as prevails in the Middle West. Last week he attended a meeting at Harrisburg, Pa., called for the purpose of organizing a State federation in Pennsylvania. Thirty-one states are now affiliated with the American Farm Bureau Federation, with a membership of 927,431, which is growing rapidly. Seven more states are now ready to make application for membership.

* * *

The National Grange is referring to the recent arrest of three officers of the Louisiana Dairymen's Co-operative Association on the charge of conspiring to restrain trade and keep up the price of milk, as more evidence of the need of the early enactment of the Volstead co-operative marketing bill which gives the farmers the same privilege of collective bargaining as is enjoyed by other classes.

* * *

Evidence is accumulating that Congress went too far in cutting down Department of Agriculture appropriations. The Bureau of Animal Industry has lost 131 employes because of this would-be economy since June 30th. A large number of these men have scientific training in research work and the prevention of animal diseases, which made their services highly valuable to the department. Many were engaged in hog cholera eradication work, one of the most important of the Bureau's activities.

* * *

Those city business organizations that never take the farmer seriously are having the "laugh" on the farm organization leaders who "so industriously forecast crop failures" some sixty days ago. They point with great jubilation to the report of the Bureau of Crop Estimates, which indicates a total wheat crop of 809,600,000 bushels. Added to the 109,318,000 bushels carried over from last year, they figure that we shall have enough wheat for our own needs and over 300,000,000 bushels for export.

* * *

Lower sugar prices are predicted by Howard T. Figg, special assistant attorney-general in charge of the Department of Justice fight on profiteering. He says there will be sufficient sugar for canning purposes. Many candy manufacturers bought heavily several months ago and with the demand for candy decreasing they are applying for licenses to sell their surplus sugar. The prospect of an unusually large sugar crop is also having a tendency to cause hoarders to unload. The Department of Agriculture estimates an increase in this year's sugar producing in the United States of 330,000 tons. The sugar beet crop covers a million acres, compared with a five years' average of two-thirds this area, and the indications are favorable for a heavy yield.

* * *

That the War Department's sensational advertising of its surplus stock of meats, which it is selling at one-half the price the Government paid the packers, as part of the administration's scheme to break prices, is indicated by the statement of Mr. Figg that this move has the full support of the Department of Justice.

Notwithstanding this drive for lower prices for products of the farm, Samuel Gompers, president of the American Federation of Labor, has issued a warning that union labor will resist to the last ditch any reduction in wages or any curtailment in industry, and the tendency of the Government seems to be to back up Mr. Gompers in his high-wage program.

* * *

A matter of more than ordinary interest to farmers is the referendum vote recently taken by the United States Chamber of Commerce, which gives overwhelming approval of a recommendation that strikes by public utility employes should be prohibited and that tribunals should be created by law to adjudicate in decisions binding on both parties differences between public utilities corporations and their employes. It was argued that in public service activities the public interest and well-being must be the paramount and controlling consideration. The power of regulation and protection exercised by the State over the corporation should properly extend to

the employes in so far as may be necessary to assure the adequate, continuous and unimpaired operation of public utility service. A total of 1649 out of 1667 voting, favored this proposition.

* * *

The Farmer-Labor party is attracting little attention in Washington and so far as I am able to ascertain has not received the endorsement of any boni-fide farm organization. A Farmer-Labor ticket has been nominated in New York State but it does not contain the name of a single farmer or anyone identified with the agricultural interests.

* * *

At a recent meeting of the Montgomery County (Md.) Pomona Grange a resolution was passed opposing any efforts to repeal the excess profits tax. The patrons were also strongly of the opinion that in the next cabinet there should be a farmer for Secretary of Agriculture, and that farmers should be named on such commissions as the Interstate Commerce Commission and also on the United States Shipping Board. A. M. Loomis, of the Washington Grange headquarters, made an address.—Elmer E. Reynolds.

HARRISBURG LETTER

Crops Closely Watched.—It is doubtful if in years as close study has been given to the crops of Pennsylvania as is being bestowed now on Capitol Hill. Reports from over 900 districts are being tabulated and analyzed with the greatest care and as a rule the grain reports are excellent. Many districts, notably in the "wheat belt" are showing a higher yield per acre than expected. The labor situation has been a big handicap in some sections, altho community work has saved the day. The corn and potato crops are reported as looking good for August 1, altho there are some instances where blight has struck potatoes. The fruit drop, while heavy, will not cause a material reduction in the estimated yield.

Standardizing Potatoes.—Secretary of Agriculture Fred Rasmussen says he has been impressed with the interest being taken in the move to standardize potatoes, especially in counties where there has been an extension in growing. In a number of counties the acreage is greater than ever and agents of large houses have been going through the districts. The standardizing movement has made big progress in the last few years.

The Moth and Its Kind.—Director J. G. Sanders, of the State Bureau of Plant Industry, is of the opinion that the Japanese beetle and the gypsy moth have not gotten far enough to be dangerous in Pennsylvania this summer, but that it will take vigilance to restrict them to the areas where they have been identified. The gypsy moth was located on some spruce trees in Cambria county, but nowhere else. Federal aid in the fight has been extended.

Logrollers Around.—From what is being heard around the Capitol the report of the State Constitutional Revision Commission is going to have a rather rough time even if the Governor does take up the cudgels in its behalf. The Commission will report in January, including in its recommendations the new budget system for the State government and the reduction of the charitable appropriations to a system. Some men are anxious to present bills to the next session to try out the plans in advance of any constitutional amendment, but the hospital logrollers have been mobilizing and some were here a few days ago asking as to prospects on the constitutional report. It is going to take some strong and fearless leadership to get a change in the appropriation system.

Only a Score Left.—Only about a score turnpikes are left in the State, it is said at the Capitol. Most of those on State main highways have been freed or are in negotiation. As soon as the money comes in steps to free more will be taken. York and Lancaster county authorities have agreed to join in purchases next year.

Women on Boards.—Appointment of women to boards of trustees of State normal schools, which was started some time ago in the case of the Edinboro school, has been established as a state policy and the first names have been announced. Incidentally, the interesting fact is stated that most of the pupils in the normal schools are girls, showing that less and less are men turning to teaching for a start. Dr. A. L. Rowland, of the Teacher Bureau, is calling for extensive changes in normal school programs.

School Consolidation.—Dr. Thomas E. Finegan, the State Suprintendent of Public Instruction, has called attention to the fact that while educational officials have been urging consolidation of schools in various localities as desirable the law does not permit the state to force mergers. He holds that it is a business proposition which must appeal to the people in charge of schools. Where attendance falls below ten in a school, however, consolidation is mandatory and the state will insist upon it.

Farm Sales Vary.—Some statistics are being gathered on prices for farm land in Pennsylvania and they are showing a wide variation. Farms have sold in some of the big agricultural counties at small figures, compared to former years, while some sales have come to light close to cities which have been high, while some sales have come to light close to cities which have been high. Another interesting fact is that many farms being sold do not contain orchards, the old time orchard having been allowed to pass away. This is due to the development of the commercial orchard. Reports of scores of farms for sale show no orchards.

Forestry Economy.—Commissioner Gifford Pinchot's plan to consolidate the State forests so that each forester will have supervision over a large area, running from 40,000 to 50,000 acres, has been worked out and becomes effective at once. It is believed this plan will result in better results as it will put the men on their mettle and enable tried administrative methods to be put into effect. It does cut down the number of jobs and perhaps it may have its effect upon the general state government. Forestry has been affording an interesting subject for observation, but whether it will be an example depends very much on what happens here next winter.

More Potash.—Chief J. W. Kellogg, of the Bureau of Chemistry, has reported that while there are numerous instances where ingredients and guarantees on fertilizers do not agree, the variations are slight and his analyses show more potash is being used. State agents have been keeping a tight rein on fertilizers and numerous prosecutions for unlicensed sales have resulted, while the more glaring instances of shortage of plant food in the mixtures have been penalized. The State authorities say they would be glad to learn of instances where serious shortage of materials as compared to guarantees are discovered.

Hamilton, Harrisburg, Aug. 9.

NEW YORK LETTER

State Crops.—A. S. Merchant, the Lackawanna's agriculturist, has been visiting many counties of the State to study crop conditions. He reports farmers and their families not working overtime, but "double time" to increase production in an absence of farm help. He reports the hay crop nearly completed, with only a 50 percent crop in many sections. Peas were good and that harvest is nearly complete. Cabbage is a little late but is making an excellent growth. The acreage is short in this crop. He found only the largest and best potato growers using Bordeaux to prevent late blight, the most destructive potato disease. Too many growers are using diseased seed stock and are getting too many weak hills. Mosaic and leaf roll are very prevalent and these can only be eradicated by the use of disease free seed. The great two-day potato tour of leading potato sections are being engaged in this week, hundreds of potato growers of the entire State participating.

Milk Dealers Divided.—Up-State milk distributers are divided in their policy regarding a rise in retail milk prices, some adhering to last month's price and others jumping a cent.

Prison Privileges Suspended.—The permanent suspension of the Mutual Welfare League of Auburn Prison has raised a protest from prison reformers. After seven years' trial of it the privileges have been withdrawn following a period of insubordination.

Canners Stop Buying.—Tons of cherries are rotting in western New York because the canneries were forced to stop buying because of the can shortage. Still more are wasting for lack of pickers. Raspberries are being taken by canners now at 20 to 23 cents per quart.

Exchange Developments.—The farmers' G. L. F. Exchange has bought a big warehouse in Syracuse and equipment costing $40,000. In the past twenty days 117 carloads of feed were handled.

Farmers' Planks.—At the recent unofficial convention at Saratoga the Republican Party adopted the three farmers' planks recommended by R. D. Cooper, who went to the national convention in their interests. Many leading farmers were present to discuss agricultural matters with party leaders, a new departure of value to the entire people.

Fair Notes.—The county fairs will begin next week with more than usual attention paid to agricultural interests. The farm and home bureaus are of great value in this work and will this year do more than ever to place farm life on a better basis. The Home Bureaus for the first time will have a special day at the State fair and a large exhibit on the grounds. The Country Theater is expected to do much of value to enlist interest in rural amusement features.

State Wool Pool.—The new G. L. F. Exchange will arrange to store and handle the State wool pool for the farmers at its new warehouse and will as fast as possible develop other lines of selling farm produce to better advantage.—M. G. F.

NEW JERSEY NEWS

Highway For Farmers.—Cumberland County farmers, particularly those who raise products for the Philadelphia markets, are greatly elated over a decision of the new New Jersey State Highway Commission to begin operations next year under the 1921 program for the construction of a stretch of road fourteen miles in length from Bridgeton to Mullica Hill. This will be a section of the $15,000,000 state highway which is being built from Hudson to Cape May Counties. A request for the highway was made to the commission by a large delegation of Cumberland County men at the State House. The board was informed that millions of dollars worth of produce, shellfish, fish, etc., could be shipped to Philadelphia and many other points in the country from sections of Cumberland, if the road were constructed and that because of freight congestion in the past and consequent inability of the farmers to get produce and other shipments to market by way of Philadelphia-bound trucks, much produce was left on the farms to rot or be fed to the swine and other animals. A strong plea for the Commission to use what was estimated by Assistant State Highway Engineer Edward T. Read would be a half million dollars on the building of the stretch of highway was made by A. R. McAllister, of the Bridgeton Chamber of Commerce, while similar appeals were made by Roscoe C. Ward, interested in automobiles and good roads in Cumberland, and F. F. Smith, who is prominent in civic affairs in Bridgeton and other parts of the county.

Grangers' Outing.—Thousands of grangers from Mercer and other Central Jersey counties enjoyed the annual outing and picnic of Mercer Grange at Springdale Park near Yardville, and while many subjects were discussed in the informal assembling of many groups with farm problems as the leading topic, considerable talk was devoted to politics. Every candidate for office in this section taking his candidacy seriously, attended the event. Among the farmers the name of former Sheriff J. Warren Fleming, of Titusville, who is master of the Mercer County Grange, was frequently mentioned for the Republican nomination for sheriff of Mercer. Many of the granges expressed the feeling that this office should be filled during the next three years by a man from the rural sections. Among freeholder candidates in attendance at the outing was William M. Pettit, who is working hard to line up the country support. L. J. Lowell, of Fredonia, N. Y., master of the National Grange, was the chief speaker of the day, while among the others were John A. McSparran, master of the Pennsylvania State Grange; W. H. Havens, of Cranbury, master of th New Jersey State Grange, and State Senator and former Governor William N. Runyon, of Plainfield.

Potato Prices Fluctuate.—Prices in the New Jersey potato market, which have been fluctuating between $3.50 and $12 per barrel, have caused a great stir in the Monmouth County belt. A drop from $12 per barrel recently to $3.50 this week prompted many of the farmers in Monmouth to seek other markets and the early part of this week witnessed a scarcity of "spuds" all along the line from Englishtown to Farmingdale. One day this week potatoes were selling for $3.50 per barrel, while a day later they took a jump to $4 and still another later day leaped to $4.75. It has been stated that the drop in prices was caused by a general drop in wheat, corn, barley and rye, and that this of course brought down other agricultural products. It was also declared that, fearing there would be an almost unhard of slump in these times of high prices, the farmers held back with hopes of finding markets outside of New Jersey. There is a belief among many of the farmers that there will be a bigger demand for potatoes in this State than in previous years, and they are holding back in anticipation that the price per barrel of this vegetable will bounce up in the future. First size potatoes sold at a newly established farmers' market in Mount Holly this week at $1.25 per basket, and second size, 85 cents.—Kelly.

CIDER RULING

"Make your apples into cider vinegar. Don't take a chance of running afoul of the Federal prohibition laws by selling the cider until it has been converted into vinegar."

Director James Foust of the Bureau of Foods, Pennsylvania Department of Agriculture, issued this warning to the farmers of Pennsylvania today. When it is legal for the farmers to sell sweet cider containing less than one-half of one per cent of alcohol, yet the Director pointed out that but a slight fermentation will increase the alcoholic content of the cider above the maximum fixed by the Volstead Law, and the farmer, as well as his customers would then be liable to prosecution.

"Cider vinegar will net the farmer from 30 to 35 cents a gallon when sold by the barrel," said Director Foust. "By making his apples into vinegar the farmer not only avoids all the danger of even innocently violating the Volstead Act, but he also brings himself an excellent financial return on his apple crop."

"The Federal authorities at Washington have ruled that cider may not be sold unless it contains less than the amount of alcohol fixed by the Volstead Act. The average farmer has no means at his disposal of telling the exact alcoholic content of his cider. The safest course for him to pursue, therefore, is to carefully store his cider away until it has been changed into vinegar, when he will be able to find a ready and profitable market for his product, without running the slightest danger of running afoul of the prohibition laws."

COMING EVENTS

Vegetable Growers' Association of America, twelfth annual meeting, Columbus, O., August 25-28.

Hornell Fair, Hornell, N. Y., August 31-September 3.

New York State Fair, Syracuse, September 13-18.

Agricultural Society of Queens-Nassau Counties, annual fair, Mineola, N. Y., September 21-25.

Farmers' Industrial Exhibit and Picnic, Williams' Grove, Pa., August 30-September 3.

Eastern States Exposition, Springfield, Mass., September 19-25.

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Quickly pays for itself in these times of high butter-fat prices and scarcity of labor. It does so doubly quick if your present separator is too small, half-worn-out, or you have none at all.

The De Laval Separator skims cleaner, is easier to turn and wash, and lasts longer—that is why there are more De Lavals in use than all other makes combined.

The De Laval is the World's Standard Separator.

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OHIO ENSILAGE CUTTERS

We are agents for the Ohio Ensilage Cutters. With a big stock on hand we can make prompt shipment. Send for Catalog and attractive prices.

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A silo ought to last as long as the barn it is attached to.

—A new theory to some, but not too advanced to fit the Green Mountain standard of construction.

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The new hip roof adds distinction and gives extra capacity. Green Mountain staves are of heavy, well-fitted lumber, dipped in creosote preservative. Hoops are of extra heavy steel with rolled threads. The doors fit like safe or refrigerator doors—a patented feature. The ladder is all-wood to prevent frosted fingers in winter. Warping, twisting or blowing over is prevented by new anchorage system.

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FRANKLIN, IND.

HAY Ship to The Old Reliable House DANIEL McCAFFREY'S SONS 623-25 Wabash Bdg., Pittsburgh, Pa.

POOR QUALITY ROUGHAGE

Farmers are getting but little special help for haying. They are doing the haying, however, as of old. It will be late before all are through. Some September grass will be harvested. For many years that was hardly the case. Years ago September was a haying month but dairymen found that it did not pay to let grass stand so long. They still find the same, but circumstances compel them to continue late now. The whole family is as likely to take a hand as any way. That is all right except in cases where ill health or old age should draw a line. There are cases where farmers are working too hard.

Neither the hay that is cut late nor the corn fodder that lacks care, as some of it will, can be of the usual good quality. It will need to be fed this year. The hay crop is rather short, though not so short as it was feared three weeks ago. All roughage will need to be fed this year. In some cases it will not be readily eaten unless the stock is kept short or something is used to make it more palatable. I do not like the idea of coaxing stock to eat what they do not want because it is inferior. In such cases as the coming winter appears to be, it is best, and the stuff to coax with so far as I have ever tried it out is molasses. It is not so bad a feed any way, but I have never fed it except in water distributed over feed that cattle did not like so well. It works out in really good results. I would prefer to have the feeds to my liking and that of the cattle, but if that is impossible then do the next best.—H. H. Lyons, New York.

Grace Darling, of St. Mary's; 14,515 lbs. milk, 863 lbs. fat at 12 years, 7 months

TO FIGHT TUBERCULOSIS

The regular meeting of the Harford County Farmers' Federation, an organization representing every farmers' association in the county, was held in the Court House, Bel Air, Md. The subeet of the evening, "The Formation of an Anti-Tuberculosis Society," was discussed ably by Judge Harlan, Messrs. Brookes, Hoopes, Gladden Davis, Dr. Creswell, County Agent Derrick and others, with the result that a committee of ten was named to prepare articles of incorporation and devise ways of raising $1000 with which to pay a veterinarian for one year to test the cattle of the county.

It was the openly expressed ambition on the part of the dairymen present to make Harford the first county in the United States where cattle are free from tubercular taint. This would not only mean better health in our cattle, but better health in our people, make a greater demand for our milk and stock, gradually improve our cattle breeding, but would also create a tremendous advertisement for our county, already famed for its many herds of purebreds. It is taken for granted that when this plan is generally known a ready response to the request for contributions will be made and the project of examination will proceed.

THE BACTERIA COUNT

I notice in today's issue the article entitled "The Milking Machine and the Bacteria Count." This and nearly all other articles published on the subject would indicate that a high bacteria count depended upon neglect in washing the units of the milking machine. I believe you are wrong.

Three years ago I had charge of a herd of sixty head of Holsteins. From July to October a milking machine was used and I washed the machine myself, taking every care to have it clean. The bacteria count ran anywhere from 10,000 to 1,000,000, and sometimes above the higher figure, usually ranging between 200,000 and 500,000. The last day used the count was 352,000.

It is my opinion that much the blame given the washer of the machine belongs to the one attaching the teat cups to the cow. There is a suction and for an instant or longer some of the cups are turned downward and reach the bedding, consequently some of this bedding and other filth is drawn into the cups. It was nothing unusual in washing the units to draw out pieces of bedding from an inch to four inches in length. Probably using sawdust or shavings would largely eliminate the filth from this source. Or if the operators of the milking machines would be particular to handle the cups in such a way that they would never turn downward.

This reminds me that I once tried cooling milk by injecting cold air into it instead of running the milk over coils filled with cold water. The bacteria in this case was reduced to from 1000 to 4000 with ordinary dry hand milking, but no special care being taken. This cold air injected into the bottom of the receptacle carried off the odors as well as the animal heat, thus removing what the bacteria thrive upon and multiply so rapidly. It would seem that someone would manufacture a cooler on the cold air principle.—A. H. P.

KEEP UP THE MILK FLOW

Flies and hot weather, along with poor pasture, join forces in this season of the year to reduce the milk flow in our herds. Anything that can be done to keep it up just now is economy.

In the early summer season when pastures were abundant, it was not advisable to feed grain, except to high-producing cows. But now if the milk flow is reduced materially it is rather difficult to bring cows back to their normal production. Cows that freshen in late winter and early spring have now given about half of their normal yearly production. Generally they will not give a full flow of milk until another lactation period. It is economical, therefore, to feed grain during the months of the late summer, in order that the herds may produce well during the fall months when milk brings its best figure.

If a season of drought comes on it may be necessary to go into the corn field and cut green corn, but if the pastures are fairly good and no soiling crop has been provided, a grain ration consisting of 500 lbs. corn-and-cob meal or 400 lbs. cornmeal, 200 lbs. ground oats or bran, 100 lbs. cottonseed or oil meal, 100 lbs. gluten may be used. This ration is fed according to production at the rate of one pound of grain to each three and one-half pounds of milk.

Dairymen who have young calves started in the spring should see that they receive grain during this part of the summer, for calves should grow very rapidly now. If they are allowed to become stunted no amount of care and feed will bring them back to normal size later on and they cannot be bred as early.

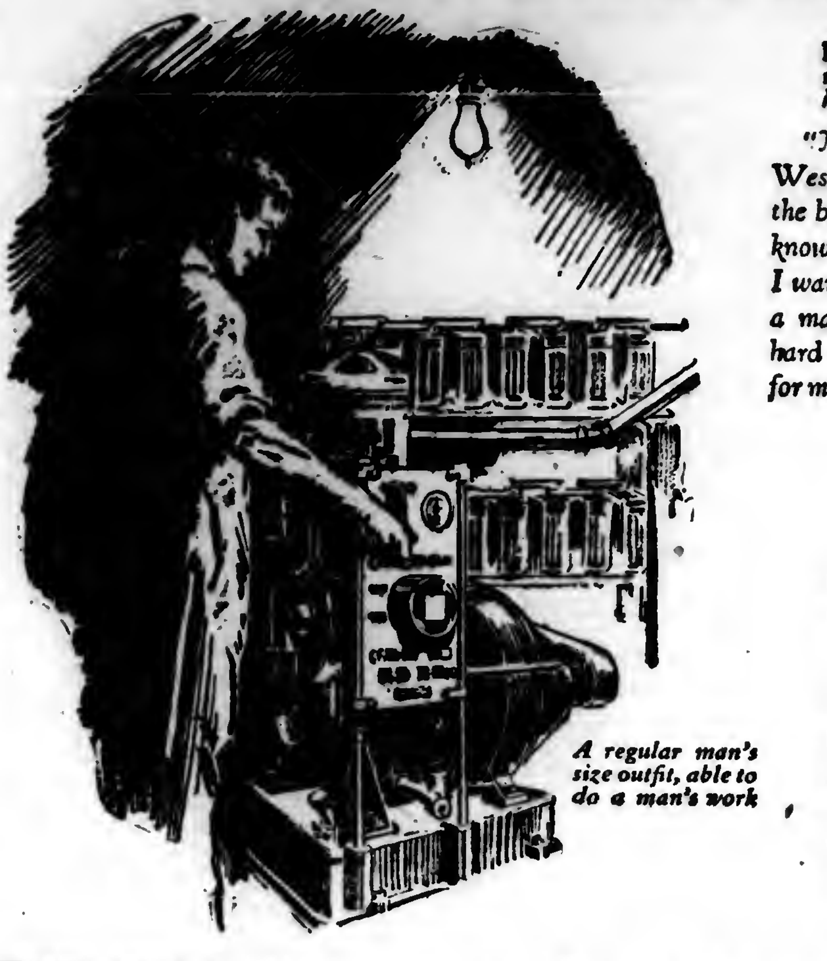
Calves under six months of age should not be turned out in a pasture during the day where flies and heat will annoy. If they are turned out they should be in a field where there is plenty of shade. The following ration for calves is recommended by the State Agricultural College: Cornmeal, 3 parts; crushed oats, 3 parts; wheat bran, 1 part; oil meal, 1 part.

SCOTCH AYRSHIRE JUDGE AT THE NATIONAL

The Ayrshire Breeders' Association announces the selection of the Honorable Hugh W. B. Crawford, of Chapmanton, Castle Douglas, Scotland, as judge of Ayrshires at this year's National Dairy Show, and Mr. Crawford has cabled his acceptance of the duties.

Mr. Crawford is not only a breeder, but is in educational work as well. He has been an active participant in all dairy development work in Scotland for a great number of years. He is possibly the best known breeder of Ayrshires in Scotland at the present time and is most highly respected by his fellow-breeders.

"How a new kind of farm hand added acres to my farm"



A regular man's size outfit, able to do a man's work

Editor's Note: W. E. Shetrone, a farmer near LeRaysville, Pa., shows how you can help to solve your labor problem.

"Now, I'm not going to tell you that the Western Electric Power and Light Outfit is the best on the market. The chances are you know more about farm plants than I do. All I want is to tell how this outfit has been doing a man's work on my place—when men are hard to get. That is how it saved time enough for me to cultivate seven acres more last spring."

W. E. Shetrone
LeRaysville, Pa.

Mr. Shetrone's house is pleasantly located

"LAST YEAR I was struggling along with my little farm—milking by hand, taking a two-hour trip to the creamery every day, working hard to support my family. Then a salesman showed me how I could do the work in less time and with less effort by installing Western Electric Power and Light equipment. Well, I put the apparatus in, and right from the start it began to save time and labor. In fact, the time it saved me made it possible to plow seven acres more last spring.*

A powerful outfit for heavy work

"Power ought to be the first consideration in buying a farm plant. There are plenty of good electric sets satisfactory for lighting. But not many of them are strong on power. You can't expect them to do the hard work.

"The Western Electric has a three horsepower engine, which as you know is ample to run most all the machinery. Grindstone, feed-mixer, churn, mill—you can operate them all together from a shafting hitched up to this powerful engine, because there's a pulley on it for just such work.

"In generator and battery too, power is the feature that impressed me most. My Western Electric outfit furnishes plenty of electricity to light the house and barn, and at the same time it runs the pump, the milking machine and such household appliances as a vacuum cleaner and a washing machine.

Why the battery lasts longer

"Another big feature is the automatic control of the battery charge. At the start the current flows in at a fairly high rate, but as the batteries fill, the rate of flow becomes less and less—till at last the current is just trickling in. Then it stops by itself. This 'tapering charge' takes the strain off the batteries and so *makes them last longer.*

"Well, the Western Electric outfit certainly has helped me in my work. And talk about time saved! Those extra seven acres I was able to plow will produce some handsome profits this fall, I can tell you."

A portable motor drives the grindstone

*What the Western Electric Power and Light Outfit did to make Mr. Shetrone's farm more productive, it can do for your farm too.

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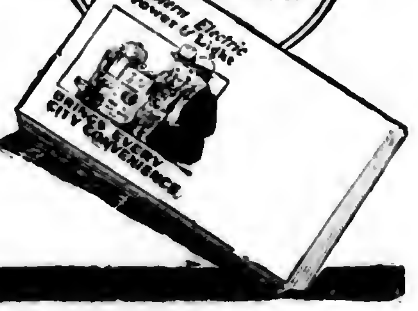
Some good territory still available for live-wire representatives

For further information write to the nearest Western Electric distributor for booklet PA. 4.



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Write for booklet and further information.

Spark Plugs and Threshing

YOUR gasoline engine must give uninterrupted service in threshing season. You cannot afford delays caused by spark plugs fouling. Therefore, use sure-fire Bethlehem Spark Plugs.

The mica in the Bethlehem de Luxe Tractor Plug is wound about the center-spindle, *then reinforced* by mica washers, compressed into a granite-like whole.

The great International Harvester Company, after exhaustive tests, has adopted Bethlehem Spark Plugs as standard equipment. Let this be your guide in buying spark plugs.

In Bethlehem Automobile and Truck Plugs, improved engineering ideas reduce liability of fouling. Special-formula porcelain reduces breakage and current-loss to a minimum. Studebaker, Marmon and 48 other manufacturers have adopted Bethlehem Plugs. Write for free copy of "Hit or Miss?".

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Not for Wheat Alone

In the past few years much of the *best grass land* has been plowed up and used for other crops. It will be reseeded to grass following wheat. For this purpose a fertilizer containing *6 to 8 per cent of*

REAL POTASH

will do good service for both grass and wheat. Insist on getting it and you will find that

Potash Pays

even better than it did before five years of Potash starvation.

SOIL AND CROP SERVICE, POTASH SYNDICATE, H. A. HUSTON, Manager
42 Broadway New York

HORTICULTURE

CANTALOUPE CULTURE

The cantaloupe with us has been one of our best paying truck crops. A few of our neighboring farmers grow them but their quality seems more or less variable. We have increased the area grown in melons yearly and in addition to our own seed we try any that we hear or read about that are a success.

Seed

Our aim for the last few years has been quality. Last year we tried out an early maturing variety on our grounds and altho it came before the rest of the melons the quality of the flesh was so poor in flavor that we rejected it entirely. Our own seed is chosen from cantaloupes eaten at our own table. The finest are taken from healthy vines with no apparent disease. These are heavy netted, medium to large sized and picked when ripe. If the family approves the flavor, seed is saved. The seed that comes from the early fruit is saved separately and planted first the following year.

Select and Grade Carefully

Seed taken from these melons are placed in buckets and cleaned. All heavy seed is saved, put in fresh water and only plump seed aired in the shade on wire screens. Stirring once in a while and keeping the seeds in a thin layer soon drys them out. They are then placed in tin cans or boxes with lids that have air holes. The containers are placed in a dry room. When possible we germinate some of the seed in a "rag doll," together with other seeds to see if they are vital.

We have added a small plot of Bender's Surprise to our area this year. They are in rich ground and at the present time are showing healthy growth and are beginning to fruit. We grew a few hills of this variety last year and the fruit grew to a very large size. Owing to the season, which was extremely wet, the quality of most of the fruit was poor. This was true of nearly all melons last year, so we are giving this variety another trial.

We have tried many varieties in the past—Fordhook, Montreal, Hackeusack, Salmon Flesh, Jenny Lind and Rocky Ford. Our own seed is of the Rocky Ford type, but has been somewhat crossed with other varieties to obtain better flavor. Montreal has grown to a large size but with us was poor in quality.

Soil Preparation and Fertilization

Sandy soil, with slight southern slope, is used. Clear ground is chosen when possible and land that has not been in cantaloupes, watermelons or pickles for a number of years. Land is plowed deep and harrowed down smooth. One horse in the marker is used to run the rows four by four feet each way. A large tooth is placed on the rear prong of a stripped sweet potato cultivator, and the rows running one way deepened out. At the intersection of each hill a small spadeful of well rotted manure is placed. On top of this a liberal handful of 5-8-5 fertilizer is placed. The rows are covered up with shovels inverted on sweet potato hiller. This makes a low, flat hill. For making the hills a sawed log about 8 inches long and about 8 inches in diameter is used. To this is nailed a long handle. To the bottom of the log is nailed two crosspieces. This is stamped on each hill and divides it into four parts. Each of these four parts is planted weekly until a good stand of plants is secured. Six or eight seeds are planted in each square.

Seed is planted the latter part of April and continued until the middle of May. As soon as the majority of the plants show, spraying with a strong solution of arsenate of lead and pyrox is begun to guard against the attacks of the cucumber beetle.

While the plants are small the riding cultivator is used until they vine out. Hoeing around the plants is started early and kept up until the fruit is heavy on the vine. When the vines are long the single cultivator gets close to the plant and the vines are turned along the rows being cultivated. An old worn-out tooth is placed on the extreme right so cultivator will not run deep close to the plant.

When the vines are just starting to run 75 pounds of nitrate of soda to an acre is top dressed around the plants on a cloudy day. A small handful of lime is also applied to each hill. This seems to improve the flavor.

Two plants are allowed to grow in each hill. When cultivation is stopped a last hoeing is given and the patch is left until fruit ripens. We are considering the plan of growing the plants in pasteboard cartons and planting outside when the weather is warm.

Marketing

By far the most profitable way to market cantaloupes is direct to the consumer. We make three grades—primes, medium and culls. Primes consist of large, well-netted specimens. Medium, of well-netted, second size melons. Culls, of small or slightly overripe cantaloupes. Yellow and irregular shaped melons are thrown to the hogs. We never have trouble in disposing of our crop even when the market is glutted. Customers buy the melons early in the season and when they find the quality good continue to buy.

Stems that are cracked near the fruit and when picked up readily come away, are ready for sale to nearby consumers. If melons for shipment are desired they have to be picked as soon as crack appears between stem and fruit. These should be culled closely and packed into

standard crates. Three hundred baskets to the acre is a good yield and if picked once a day their appearance will always be fair.

Spraying weekly should not be neglected. We use Bordeaux mixture, 5-5-50, for blight prevention. When plant lice are present nicotine sulphate is added to Bordeaux and vines turned to spray underside of leaves. This year they seem to be very plentiful.

We keep cantaloupes away from pickles and squash patches to prevent cross pollination. Care should be exercised not to disturb the root system when hoeing as plants are very tender.—James E. Toomey,

NEW YORK FRUIT TO BE GRADED AT CENTRAL PACKING PLANTS

A genuine advance in the history of the fruit industry in western New York was recently recorded when duly authorized representatives of most of the local packing house associations of the fruit belt met and organized the Western New York Fruit Growers' Co-operative Packing Association, Inc. The purpose of the new organization is to standardize the grade and pack of fruit in each of nearly thirty packing houses, established throughout the fruit district of western New York. It is estimated that four hundred thousand barrels of apples will be packed this year under the "Cataract" brand, besides a large unestimated quantity of peaches, pears and other fruits, all of which will go out on the market under the name "Cataract."

The directors of the new association are H. W. Davis, Sodus; F. J. Freestone, Interlaken; I. L. Vosler, Lyndonville; E. H. Boynton, Lockport, and J. A. McCollum, of Newfane. Nelson R. Peet, manager of the Niagara County Farm Bureau, has been engaged as general manager, with headquarters in Rochester.

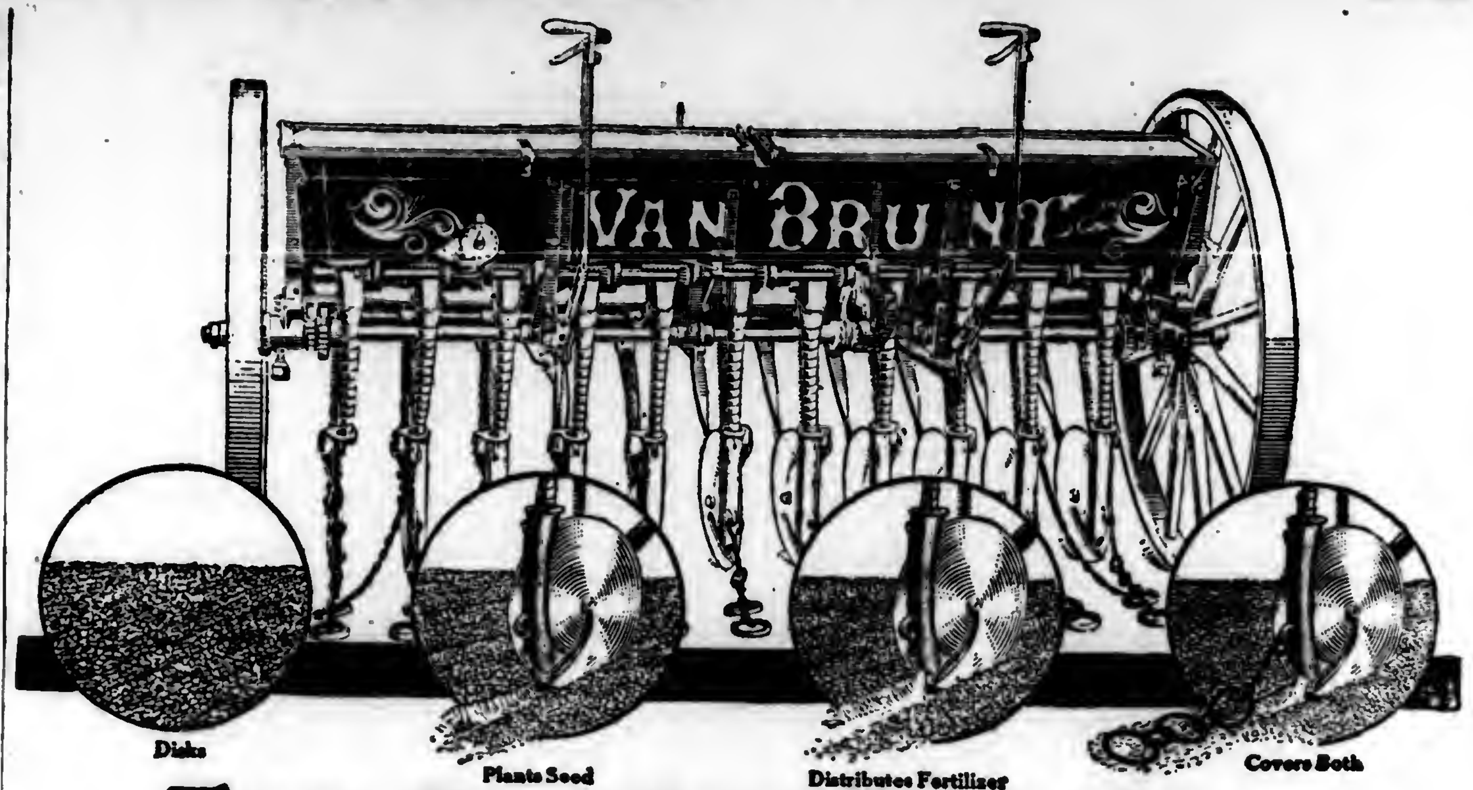
It was in Niagara County that the central packing house idea originated in New York, Mr. Peet being instrumental in furthering interest among the growers on the proposition. There are at the present time fourteen such central packing associations in Niagara County.—A. H. P., New York.

TO STANDARDIZE APPLE GRADES

The establishment of standard apple grades in the State of Pennsylvania was tentatively agreed upon at a conference of State officials and officers of the Pennsylvania Horticultural Society, held at the Capitol March 18th. The grades will not be established for the 1920 crop, but it is believed that by 1921 the rules will have been thoroughly promulgated and adopted by the fruit growers of the State

The action taken at the conference was the outgrowth of a resolution adopted by the Horticultural Society at its annual meeting in January. The Bureau of Markets of the Pennsylvania Department of Agriculture was called upon to aid in establishing standard apple grades.

Among those who attended the conference March 18th were Secretary of Agriculture Fred Rasmussen, P. S. Fenstermacher, president of the Pennsylvania Horticultural Society; J. G. Hershey, secretary of the Horticultural Society, and H. W. Anderson and C. A. Greist, members of the executive committee; Director Guy C. Smith, of the Pennsylvania Bureau of Markets, and M. Stockton, of the United States Bureau of Standards.



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JOHN DEERE
VAN BRUNT FERTILIZER DISC DRILLS

Van Brunt Drill Discs pulverize the soil and make a good seed furrow because they are set at a slight angle. They run easily and properly because they are equipped with dust-proof oil-tight bearings that are guaranteed to last.

Plant seed properly—equipped with the famous Van Brunt patented adjustable gate force feed that compels seed to flow from grain box in even, continuous streams; metal seed tubes and closed delivery protect seed until it reaches bottom of seed furrow.

Distribute fertilizer evenly—finger type plates prevent choking up.

Cover both seed and fertilizer—tilting lever enables operator to set disc boots to cover the seed properly, whether a large or small team is used, up hill or down. It regulates depth of planting with relation to depth of disking. Not necessary to follow with a drag harrow.

Van Brunt Fertilizer Grain Drills are made in standard sizes and styles and can be furnished with tractor hitch and grass seeder attachment.

Valuable Book Free—"Better Grain Yields from the Same Fields"—32 pages attractively illustrated, tells how to select, test and plant seed. Write today to John Deere, Moline, Illinois, for Booklet BF-433

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JOHN DEERE MOLINE, ILL.
THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

HOLDEN
LIME, PHOSPHATE and FERTILIZER DISTRIBUTOR
SPREADS WET or DAMP LIME ROCK

30 Days Free Trial

If the Holden does not do all we claim, return it.
Increase your crops by spreading. Get a hardier, more certain stand. Put life back into the soil. Save labor and time and make bigger profits by using this lime phosphate and fertilizer distributor.
(Write for trial offer and for Folder
Tells everything. Holden spreads 16 feet wide. Handles wet and damp limerock. Passes egg size rocks. Attaches to any wagon in 3 minutes. No heavy lifting. Light draft. Find out all about it. Write.

The HOLDEN CO., Inc.
Dept. 31 Peoria, Ill.
SPREADS 16½ FT. WIDE

MANURE
HIGH-GRADE NEW YORK STABLE MANURE
Carload shipments on Pennsylvania and Reading Railroads.
Acme Stable Manure Co.
PHILADELPHIA OFFICE, 1918 MARKET STREET

R. K. TIRES
Eat up Miles!

The more mileage they do, the more they want—for these rebuilt, double tread, chain stitched tires have twice as much fabric in them as ordinary tires. And they—want and expect—twice as much work!

The following are the little prices of our guaranteed tires

Size	Non-Skid	Price	Size	Non-Skid	Price
30x3	....	$ 7.00	34x4	....	$11.50
30x3	1-2	8.50	34x4	1-2	13.50
32x3	1-2	9.00	35x4	1-2	14.00
33x4	....	11.50	36x4	1-2	14.50

2 percent off for cash with order.
10 percent deposit required with all C. O. D. orders.

R. K. Tire Company
837 No. Broad St., Dept. A, Phila., Pa.
Send for descriptive booklet and price list.
Good Territory Open for Live Agents.

Hoffman's Hardy Seed Wheat

11 reliable varieties of Winter Wheat. Grown in fertile Lancaster County, Pa. Sound, Graded seed. Cleaned clean, free from cockle—rye—smut—garlic. Prices are just. One bushel increased yield per acre will repay you. Many customers report 10-bushel increases by changing to Hoffman's Seed. *Catalog and samples free.* Write for them today. Mention this paper.

A. H. HOFFMAN, Inc. LANDISVILLE, LAN. CO., PA.

CORN HARVESTER One man, one horse, one row. Self Gathering. Equal to a Corn Binder. Sold direct to Farmers for 22 yrs. Only $28 with fodder binder. Free Catalog showing pictures of Harvester. PROCESS CORN HARVESTER CO., Salina, Kans.

Best Yet Shoe Bargain
$3.98 On Arrival
Send No Money
UNTIL SATISFIED

Postage Prepaid

You have found it, at last! The sturdy, comfortable tan work shoe you've wanted, at the greatest bargain you'll ever see again. Making them in great quantities; selling them at few cents profit. That's the secret. This model is great favorite for hard, all-around service. I am willing to send it to you on approval—all charges prepaid. Stands up no matter how roughly treated. Made of strongest, toughest leather. Solid heavy soles and heels, strongly reinforced. Big tongue keeps out dust and dirt. Room in shoe for all five toes. Leather tanned to resist water, acids in milk, manure, soil and mines. Whole shoe soft, flexible and chuck full of comfort. A marvelous work shoe bargain. But you're to be the judge. Order your size, examine them carefully on arrival and if they are not the very best work shoe bargain you ever saw, send them back at my expense. Save money now. Fill in and mail the coupon today. Send no money until satisfied.

STEWART THE BARGAIN SHOE MAN
Binghamton, N. Y.
Send me....pairs bargain shoes, price $3.98, on approval. If not satisfactory I will return the shoes. My size is..........
Name ....
Address ....
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The Joynt Brand PURE UNBLEACHED HARDWOOD ASHES

The best fertilizer by test. A complete and sure fertilizer for all growing crops.

For top dressing worn-out grass and meadow lands, wheat-growing or seeding down they are unexcelled.

A few cars dry and fine enough for drilling. Sample and prices on request

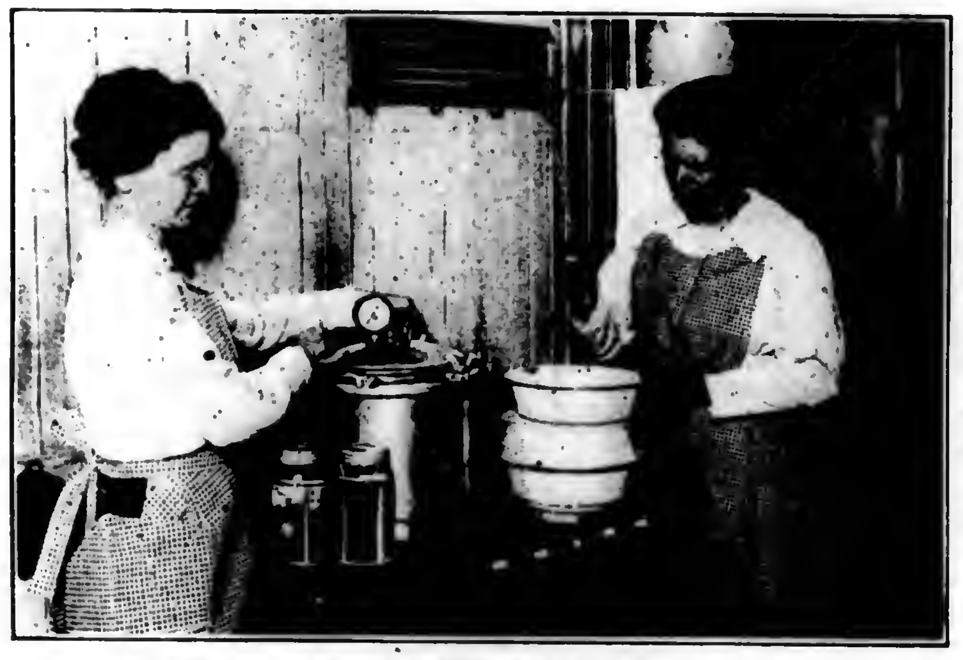
Agents wanted. Correspondents invited.
Address JOHN JOYNT, L. B. 297, Lucknow, Ont
References: Bradstreets Agency; Bank of Hamilton Lucknow, Ont.

Cooking With Steam Pressure

Saves Time and Fuel for Housewife

An account of a few actual operations of a busy farm housekeeper who has decided that the saving of time and fuel secured by the use of a steam pressure cooker is demanded by present conditions in our farm homes may be of use and interest to other farm women. In these days we country housekeepers have to do a huge amount of work unaided by human help, and we need to make the most of every minute and to use as many efficient labor-saving methods and devices as possible.

Cooking for a family of hearty outdoor workers is one of our big jobs, and I consider that an efficient steam cooker is a great aid in this work. There are some thoroly satisfactory cookers of this character to be had that are easily kept clean, are foolproof, practically indestructible and that are easily lifted, and have no packed joints that need attention frequently. They are made of cast aluminum and provided with safety valves that operate unfailingly. And I find that surprisingly little fuel is required, considering results.



Canning and Cooking With Steam-pressure Cooker

This cooker holds seven of the quart cans shown and has a dependable safety valve and pressure indicator. The galvanized wire rounds separate the basins used for cooking several foods at once in the cooker. Note convenient handling device for lifting hot basins out of the cooker.

A neighbor and I have owned cooperatively one such steam cooker for quite a long time and it has given fine service. We have found it a great time and fuel saver in saving tough and extra big cuts of meats for threshers and other extra farm hands. The only objection to it is that it is unnecessarily large for our everyday purposes. So recently this neighbor bought a new one that holds seven quart jars or fourteen pint ones. The sides are straight up and down, which makes a much more economical shape than the 10-quart, pear-shaped cookers which one sometimes sees.

When cooking meats, beans or other foods at the same time all may be put in the cooker, and often she puts in a basin of brown bread to steam or a pudding. She uses rounds of galvanized wire to separate the dishes in the cooker (see illustration—the lady at the right is my neighbor, Miss Trappe, who sometimes writes for "The Pennsylvania Farmer). She has insisted that I take the cooker and use it for a time to make sure that it is what I want to buy for my own everyday use, and I have decided that it is, for it is wonderfully helpful.

Most of our New York State home bureaus are using one of these cookers in a smaller size. The home agent demonstrates its use and loans it to housekeepers to try for themselves before they buy. One such cooker has been all over our county. And a neighboring county has similarly loaned one to the farm women. One man who bought one for his wife two years ago says that its durability is beyond question, because theirs has been used by all sorts of inexperienced women and does just as good work as ever, which is as good work as anyone could wish.

Borrow one of your home agent if you have any doubt about your ability to make it pay, but I can tell you right now what your decision will be. They are expensive, as all real good things are, but no progressive farmer will deny his wife one of these helpers in these days of shortage of housework help for the farm, because it is such a time and heat saver.

This morning I canned five quarts of string beans, cooked a quart of 2-year-old red kidney beans until they were nice and tender, and steamed a graham pudding, all in the steam cooker, in forty-five minutes over one lid of my stove, while over the front lid I heated my flat irons. After the first ten minutes I very greatly reduced the heat under the cooker and still kept the pressure at ten pounds; at intervals the safety valve would let off a little steam and keep the pressure even. That safety valve is certainly a great little device for 'tending to its job.

The dry beans had soaked in cold water and been parboiled a little; ordinary dry beans that are not so old as these, take only twenty-five minutes in the cooker. The pudding was one that used to take three hours steaming the old way I used to do it with my ordinary steamer, but the forty-five minutes in the pressure cooker did it to perfection.

Yesterday I cooked a seven-pound buff orpington hen that was five years old, in an hour and a quarter in this cooker and under 20 pounds pressure, and it was so tender that the bones easily slipped out. Indeed, it would have been sufficiently done in an hour. Such old fowls would have required much longer boiling in an ordinary kettle.

Such cookers are fine for canning meats and all sorts of vegetables. Beef and pork need 15 pounds pressure and 90 minutes cooking, compared with three hours in a hot-water boiler.

Most vegetables in cans require much less time than meat, forty-five minutes being sufficient for all but corn and peas, which need an hour. If high pressure is reduced by letting steam escape from the petcock during cooking juice will be forced from the cans almost every time. Ten pounds is enough for any vegetable and keep it steady.

You should use new rubbers and partially tighten the covers before starting the cooking of the cans. And of course you must blanch the vegetables before packing them in the cans by dipping them in boiling water for a few minutes (one to more minutes, according to the vegetable), beets taking the longest to make them slip their skins easily.

Last fall my neighbor put a pailful of crabapples in the cooker, the fruit being covered with water, and let it cook an hour under 10 pounds pressure. The pulp, thoroly softened, was then dumped into a jelly bag and allowed to drip over night. Next morning she sterilized for a few minutes in the cooker, four quart canfuls of the juice with no sugar, and set them away when cold to be made into jelly as she wanted it during the winter. With the scarcity and high price of sugar this season we are doing the same; i. e., canning just the juice, trusting to have a better sugar situation during the winter. Each quart of juice canned this way will make four or more glasses of beautiful jelly.

It is a great convenience that only one oil stove burner or hole of the range is needed to do work in a few minutes that would require three hours over the whole front of the stove for the wash boiler method of canning.

I find the cooker fine for cooking cereals, too. A basin of oatmeal or cornmeal is brought to the boil and cooked to delicious tenderness in the pressure canner in thirty to forty-five minutes, according to the amount, and at the same time that some meat or vegetables are also cooking in the same cooker over the same burner.

And a New England boiled dinner is thoroly cooked in the pressure cooker in twenty minutes to half an hour, depending on the size of the cooker and the amount of the meal.

I believe every farmer's wife should have one, as it will shorten her kitchen hours and make them very much more comfortable in hot weather, which is the time she always has most cooking to do.—Mrs. M. G. Feint, Tompkins Co., N. Y.

Does your Club hold debates? Most do. "Principles of Debate" is a bulletin the State College at Ithaca, N. Y., will send you if you ask for F 149.

It is never too late to learn—to drink milk.

IT'S TOMATO TIME AGAIN

Seems good, doesn't it, to have fresh tomatoes from the garden again? While the fuel value of tomatoes is almost negligible, their food value is quite important, because of the mineral matter which they contain—potash, phosphorus, sodium, a bit of lime and sulphur, and a trace of iron. Then the large water content, about 94 percent, makes tomatoes a good body conditioner.

Ways to Serve Tomatoes

How would you like to paste these recipes on your cards in your recipe box so that they will be handy when you want them? You have a recipe box, haven't you—one that holds good-sized cards and has them classified by means of "guides" or projections that stick up above the cards.—The Editor.

Served Raw

Tomato and Watercress Salad.—Peel and chill large ripe tomatoes that are firm, cut into slices one-third inch thick, then cut the slices into strips one-third inch wide. Arrange these on a flat dish so as to represent lattice work, fill in the spaces with watercress and serve with French dressing.

(A good French dressing is made thus: Mix well together in proportion of one tablespoon lemon juice per three tablespoons salad oil, either the cottonseed or corn or olive, add one tablespoon sugar and a dash of paprika to give a pretty red color. Or if you prefer to have a colorless dressing use cottonseed oil and do not add any paprika. Be sure to beat the ingredients well together just before you dress the salad with the dressing. You can use vinegar instead of lemon juice, but the flavor is not so mild and pleasant.—The Editor.)

Tomato and Cucumber Salad.—Peel medium-sized tomatoes, remove a thin slice from the top of each, and take out the seeds and some of the pulp. Sprinkle the inside with salt, invert and let stand half an hour. Fill the tomatoes with cucumbers cut in small cubes and mixed with mayonnaise dressing. Arrange on lettuce leaves and garnish with more mayonnaise. Shredded cabbage, chopped celery and apple, or well-seasoned cottage cheese may be used in place of the cucumbers.

Ways for Cooked Tomatoes

Panned.—Cut large ripe tomatoes into halves and lay, cut side up, in a pan. Sprinkle with salt, pepper and flour; dot with bits of butter and put in oven to brown over the top. When done remove them to a hot platter, being careful to keep them in shape, and make a gravy in the pan in which they were baked. Pour this gravy around them just before serving.

Tomatoes on Half Shell.—Cut large, firm tomatoes into halves and lay them, skin side down, in a baking pan. Dust lightly with salt and pepper and put a bit of butter the size of a pea in the center of each half. Put in a very moderate oven and increase the heat gradually. Cook 45 minutes or until the tomatoes are soft but perfectly whole. Have ready rounds of toasted bread and put a tomato half on each round.

Pour over them a dressing made thus: One tablespoon flour mixed into four tablespoons milk, then add enough milk to make a cupful. Pour into the pan in which the tomatoes were baked and stir constantly until it reaches the boiling point, then add a onion grated, half teaspoon salt and half teaspoon pepper.

Escalloped Tomatoes.—Cover the bottom of a buttered baking dish with sliced fresh tomatoes. Sprinkle with salt and sugar, and cover with a layer of bread crumbs, then dot with bits of butter. Add another layer of tomatoes, crumbs, etc., cover the pan and bake twenty minutes.

Tomato Rarebit.—To one quart of cooked ripe tomatoes allow one teaspoon salt and half as much pepper. Put over the fire and when hot break in four unbeaten eggs and add half cup grated cheese. Stir until the eggs are cooked and serve at once on buttered toast.

Salt Pork with Tomatoes.—Fry three slices of salt pork, then remove them from the pan, put in a sliced onion and cook it until tender in the pork fat, being careful not to let the slices brown too much. Return the pork to the pan, slice over it six ripe tomatoes, season with salt, pepper and a dash of sugar, and cook slowly until the tomatoes are tender.

Deviled Tomatoes.—Cut four to six tomatoes in thick slices and fry in hot fat. Serve with one tablespoon of the following dresisng on each: Cream together one tablespoon butter, one teaspoon sugar, two teaspoons dry mustard, a little salt and cayenne, and the yolk of a hard-boiled egg. Add two tablespoons each of chopped green pepper, finely chopped parsley and scraped onion; moisten with one tablespoon vinegar slightly warmed in the pan and serve on the tomatoes.—Mrs. F. W. Stillman, Union Co., N. J.

CARE OF MILK UTENSILS

No boiling or very hot water should be poured into any milk utensils until first all the milk has been removed by rinsing well with cold water, then by washing with warm water and a good cleaning powder or soapy water (do not rub particles of soap into the crevices) and rinsing well with clear warm water until the rinse water runs out clear. Then scald with boiling water. If you pour hot water into the utensils before you have removed all the milk, you will cook and set the milk into the crevices, where it remains to finally taint any fresh milk that sets in the dish for any length of time. It means everlasting vigilance, yet children can be taught to take pride in doing it the right way.—Mrs. Dana Burchard, Tioga Co., Pa.

DRINK MILK!

Grown-ups need milk.

* * *

Milk prolongs life.

* * *

Milk helps prevent disease.

* * *

Milk is food and medicine.

Drink milk and live to be a hundred.

* * *

Milk is cheaper than meat.

* * *

You give your children milk—why neglect yourself?

* * *

A glass of milk a day will keep old age away.

* * *

Nations that drink milk rule the world.

* * *

Middle age is the dangerous age—begin using milk.

* * *

When young drink milk to keep vigorous.

When old drink milk to keep well.

* * *

If milk came in medicine bottles you would gladly pay a dollar a pint.

* * *

Drink a glass of milk at this day's lunch.

* * *

No food is so cheap as milk—no medicine half so potent as milk.

* * *

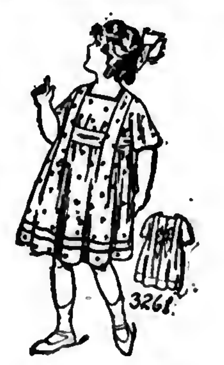
Milk is health insurance—good health is life insurance.

* * *

One hour's work will buy more milk than ever before.

PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.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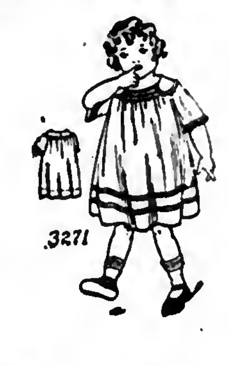
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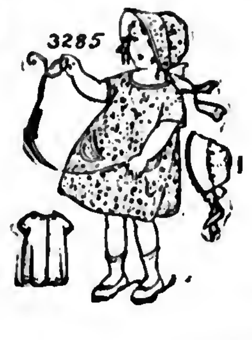
3261.—Pretty Dress for Little Girl.—The pattern is cut in 4 sizes: 2, 3, 4 and 5 years. A 4-year size will require 2¾ yards of 27-inch material. As here shown, dotted challie in white and blue are used. Pipings of white poplin trim the dress. This model is pretty in dimity or Swiss with lace or embroidery. It is also nice for gingham, percale and pique. Pattern, 10 cents.

3271.—Another Pretty Frock.—The pattern is cut in 5 sizes: 1, 2, 3, 4 and 5 years. A 2-year size will require 2¼ yards of 36-inch material. Batiste, nainsook, lawn, gingham, dotted Swiss and dimity would be good for this design. Pattern, 10 cents.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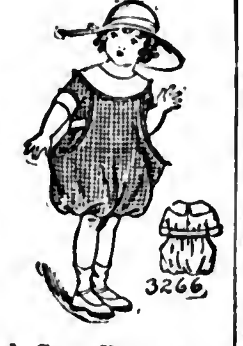
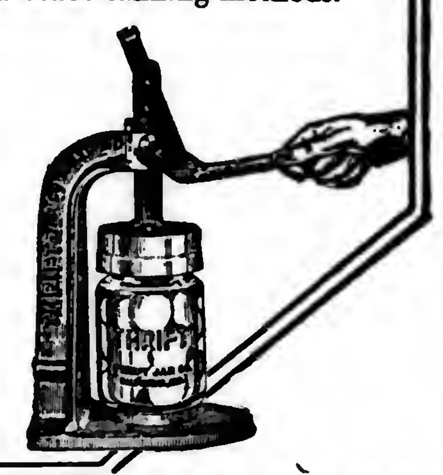

3266

3285.—Apron and Sun Bonnet.—The pattern is cut in 5 sizes: 1, 2, 3, 4 and 5 years. A 4-year size will require 2⅜ yards of 27-inch material for the apron and 1 yard for the hat. Cretonne, linen, drill, gingham, chambray or percale. The apron may serve as a dress and be worn with bloomers. Pattern, 10 cents.

3266.—Novel Rompers.—The pattern is cut in 4 sizes: 2, 4, 6 and 8 years. A 4-year size will require 3⅜ yards of 27-inch material. Checked gingham, striped seersucker, spotted percale, seersucker, drill and crepe are good materials for this style. As here shown blue and white gingham is combined with white linene and trimmed with tiny frills of the gingham. Pattern, 10 cents.

THRIFT SEALS THEM TIGHT AND KEEPS THEM RIGHT



Are You *Sure*?

AFTER your jars of "preserves" and other foods are carefully put away — are you ever really *sure* how many jars will be "good" when opened?

You are not; no matter how carefully you have canned, if you put up foods the old-style way. It offers too many opportunities for spoiling.

There is only one absolutely sure way to avoid loss in food canning. That is the Thrift Way. Thrift canned foods are sealed air tight *before processing*; and never opened until ready to serve. Nothing can enter the Thrift Jar after processing. No loss can occur.

This one feature alone offsets the slight extra cost of the Thrift Way. Yet, in addition Thrift canned foods look better, taste better and sell better. And Thrift Way is much easier and quicker than other canning methods.

Ask your dealer for Thrift Jars, Caps and Sealer. If not in stock, show him this advertisement; or write us direct for free booklet,

"The Thrift Way Makes Canning Pay"

Contains prices, Canning Chart, testimonials and valuable data on canning.

Local Agents and Dealers Wanted —Liberal Terms

THRIFT JAR COMPANY
FORT AVE. and LAWRENCE ST.
BALTIMORE, MARYLAND

99 REAL SHOE BARGAINS

$4.35

Here is one of ninety-nine real bargains shown in the new Rambler catalog. A good, durable, comfortable work shoe. Elsewhere they would cost you not less than $7.00, perhaps more. Even in our chain stores

ONLY $4.35

the selling costs brings the price to $6.00. Our great system of national selling makes this saving possible.

Genuine chrome uppers, resists barnyard acids Heavy soles of oak tanned leather, wear like iron. Brown only. You take no risk, simply send coupon. Shoes are shipped, pay postman $1.35 on arrival. If you like them keep them, if not return them and we will refund money, including postage. Your word is enough. Mail coupon today. Send for catalog. Sales last year over $1,000,000.

RAMBLER SHOE CO., Dept. P36, New York City
Send worth-while work shoes. I will pay postman $4.35 on arrival. If shoes are not entirely satisfactory I can return them and you will refund money.
Name.............................. Size......
Address.......................... State..........

Help Wanted

Wanted Experienced Bookkeeper for Farm Assistant

Single man preferred, as good board and room can be furnished. Should be a good penman, capable of operating typewriter and willing to make himself generally useful. State salary and give references, with experience in first letter.
Address LAUREL LOCKS FARMS, Pottstown, Pa.

HELP WANTED

Good mill hand, first-class butter and creamery man; farm hands, milkers for De Laval milking machines. Good positions for the right kind of men on one of the largest and foremost commercial farms in New York State. Good wages with fine board and lodging to single men and good houses to married men. Address WHEATFIELD FARMS, R. F. D. 11.

Wanted Married Man Experienced in Hog Raising

To care for 100 to [illegible] head. Must be able to butcher and prepare meats for market twice weekly during the winter and raise all crops for feeding and care of hogs during the summer. Mention salary, experience and reference in first letter.
Address LAUREL LOCKS FARMS, Pottstown, Pa.

GENUINE ASPIRIN

BAYER

Name "Bayer" identifies genuine Aspirin introduced to physicians in 1900. Insist on unbroken packages of

BAYER-TABLETS of ASPIRIN

Aspirin is the trade mark of Bayer Manufacture of Monoaceticacidester of Salicylicacid

Subscription Agents Wanted

Part or full time, Write for full particulars.

PENNSYLVANIA FARMER
261 S. Third Street, Philadelphia, Pa.

"This house was the snuggest place in the County last Winter---John."

"I was glad enough to have an excuse to stop in here on cold days, I can tell you. In the other houses you'd find everyone sitting close to the stove and the rest of the house ice cold. But in here there was a good even temperature in every room in the house."

"That was easy, Doctor, I picked the NOVELTY PIPELESS."

WARM AIR (UP)
COLD AIR (DOWN)

One register heats the house

NOVELTY PIPELESS HEATER

Behind Novelty Heating and Cooking Apparatus is 73 years of engineering skill—the use of the highest test material—fabricated in a great plant where science rules with an iron will.

We make all types of heating and cooking apparatus. The advice you get here is unbiased—you will get just the type and size plant you should have.

Not only does the Flex-O-Tuf Iron used in NOVELTY products mean longer life—less wear and tear—but the heat producing parts are scientifically balanced to give the greatest volume of heat at the least possible expenditure of fuel and effort.

Write today for descriptive circulars

ABRAM COX STOVE COMPBNY
American and Dauphin Streets, Philadelphia, Pa.
Makers of Novelty Heating and Cooking Apparatus for 73 years

DIG YOUR POTATOES THE FARQUHAR WAY

A Farquhar Digger will get you more marketable potatoes, and besides save much labor. These machines are sufficiently strong to stand the strain of hard continuous usage. They dig clean, and leave the potatoes convenient for picking.

No. 1 Elevator means larger profits for growers.

The No. 1 Elevator shown above has paid for itself in one season for some users. Rigid tongue construction holds Digger steady on the row avoiding cutting. Either Cross Bottom or Angle Bucket Elevator to suit different soils. Larger size Elevator Diggers for deep planting and bad conditions. Engine drive, if desired.

Our Success Jr. is the peer of Plow Diggers. Price so low within reach of the smallest grower. The Gilt Edge for those who desire a more elaborate Walking Digger.

"Success Jr." The plow that pays dividends on an acre patch.

Large illustrated Digger Catalog free on request. Every grower owes it to himself to send for this booklet.

A. B. FARQUHAR CO., Ltd., Box 246 York, Pa.

Also Engines and Boilers, Tractors, Sawmills, Threshers, Cider Presses, Grain Drills. Ask for literature.

For Every Farmer

The Champion All Purpose Scoop

Because we know that you realize the economy of buying better farm tools, we are putting the best materials and the most careful workmanship into *Champion Wire Scoops.*

For over 40 years Champion Wire Scoops have led in utility and durability. Shrewd, sensible farmers demand them; leading dealers carry them in stock.

Champion Wire Scoops are staple-edged, preventing cutting of the produce. They are first for handling potatoes, apples, beets, carrots, corn, etc.

Ask your dealer or order direct.

MICHIGAN WIRE GOODS CO.
502 Second St., Niles, Mich.

HAY
W. D. POWER & CO. 601 W. 33 St., New York are the largest handlers of commission hay in greater New York; if you have hay to dispose of communicate with them.
HAY

S. C. WHITE LEGHORN COCKERELS, 12 weeks old. Price, $3.00 each. Good chance to improve your flock. All charges prepaid. MRS. C. E. STUBY, BUFFALO MILLS, PA., R. 1

SAY you saw the advertisement in Pennsylvania Farmer when you are writing to our advertisers.

POULTRY

AUGUST POULTRY HINTS

PART II

Sparrows are a pest around poultry. They carry disease from one farm to another. Old barns often furnish an abundance of nesting places. Keep the barn and poultry houses tight so they will lack breeding places on the farm. Then shoot at them often enough to frighten them away. It is dangerous to use poisoned grain to kill sparrows except in the winter when the hens are in their houses. A sparrow trap is more safe. These pests steal a lot of grain, drive away song birds and infect poultry with contagious diseases. All farmers and poultrymen should help kill sparrows instead of helping to fatten the pests and furnishing them with nesting places.

* * *

Encourage city friends to preserve fresh infertile eggs in water glass. It will increase the demand for fine quality eggs in the summer and more eggs will be used in the winter. Poultrymen can obtain lots of help from the experiment stations concerning production methods but they must work out their selling methods for themselves. This water glass method of keeping eggs enables us to obtain more money for our summer eggs and also sell eggs in larger orders, which is a saving of time. A poultryman who once obtains a number of orders for eggs for water glass will find that the demand cannot be filled. It is much more encouraging than selling eggs to the grocers.

* * *

More communities with custom hatcheries will be a boon to the poultry business on the farm. At present there is too little early hatching on the farm and the flocks are of all ages. Through custom hatching the farmer can obtain a hundred or more chicks of the same age hatched from his own eggs at a moderate expense. He avoids the risk and worry of hatching at home and need not invest so much money in equipment. A skilled operator of large incubators can then furnish the farmer with plenty of good livable chicks at a medorate sum and it is apt to result in larger and better flocks on the farm. At present, day-old chicks are high but no higher than they should be. But when the farmer furnishes home produced eggs to obtain these chicks the cost is much less. We believe custom hatching is a winner, especially for the busy farmer, truck gardener and fruit grower who already finds the spring a very busy season without taking on the operation of incubators. It is none too early to plan any extensions of the poultry business for next year.

* * *

Mark the pullets that feather out rapidly and show signs of great vigor. They are the birds that make the best layers. Mark the cockerels that develop the quickest and save them for breeding stock next spirng. Vigor and early maturity are important points in building up profitable poultry flocks.—R. G. Kirby.

GROWING THE SOFT ROASTER

What is meant by a soft roaster is simply a quickly-grown chicken that has been well fed and marketed while still soft fleshed. Pullets when sold as soft roasting fowls are pushed as rapidly as possible for flesh production so that they may be marketed before they begin laying. After a pullet starts laying she no longer belongs to the "soft-meated" class. Formerly the term was applied to winter-grown chickens and the business of growing them was confined largely to the South Shore district of the State of Massachusetts.

Today the growing of fancy, soft-meated fowls is more common at all seasons of the year and in many sections of the country it is becoming very popular, altho the production of these superior market chickens is by no means general. It costs no more per pound, often less, to grow a good chicken than it does to grow a poor one.

Soft roasters, like most other farm produce, should be marketed when "ripe." There is a period of its life when it is best, when the meat is near perfection in softness and fine flavor. This stage is practically recognized at sight by experienced poultrymen when handling the birds. If they are held much longer they may "go by" and lose quality in meat to say nothing abot a loss of plumpness and attractiveness of carcass.

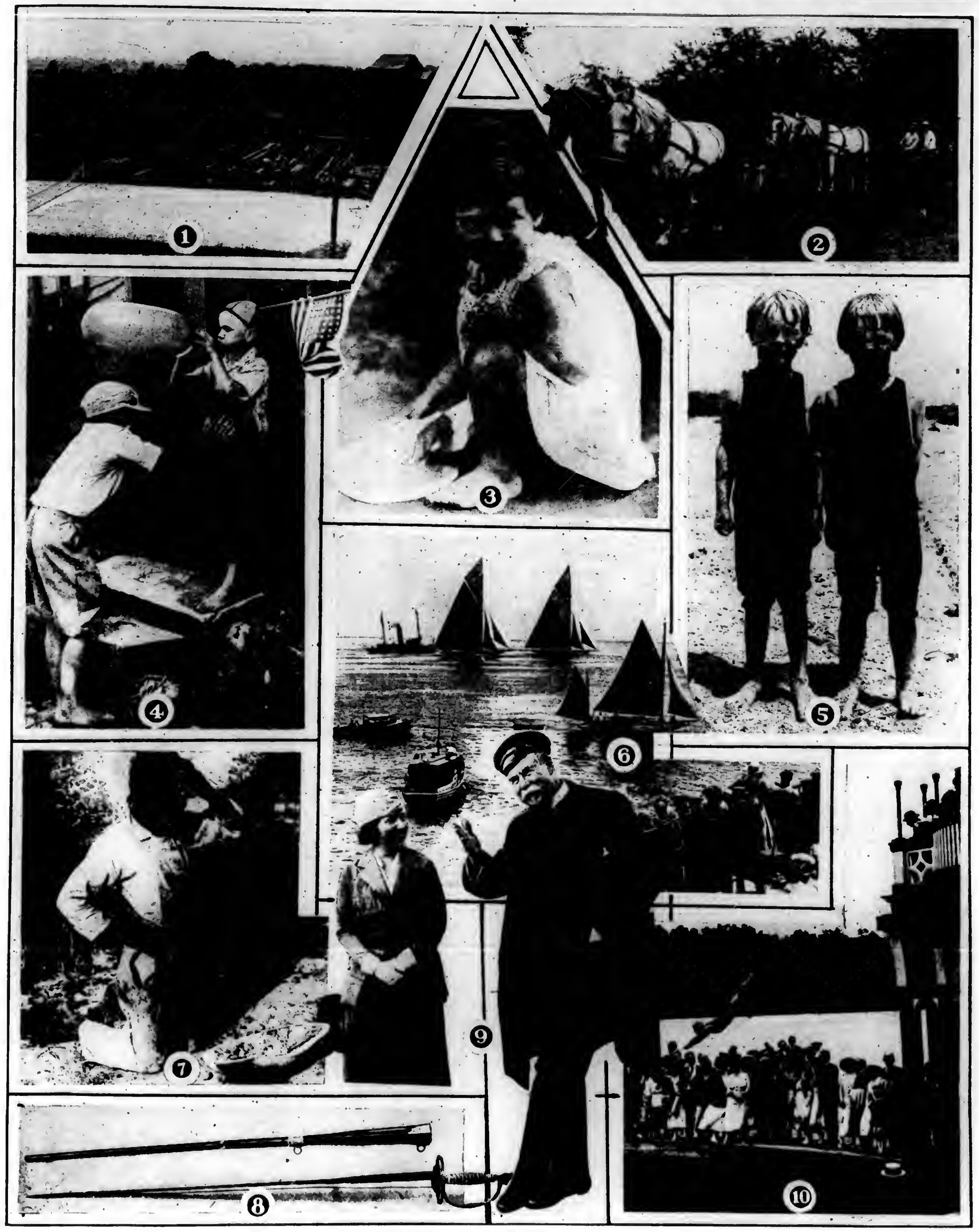
The great secret in successfully growing soft roasters is to have the chickens happy and contented and to keep them well fed and growing, hatching and feeding them so they will come "ripe" at the time of highest prices and greatest demand.

The raising of "soft roasters" has become an independent industry, any properly prepared birds weighing more than six pounds being in great demand from the first of January until the middle of summer, and again from September on to Thanksgiving. These command prices almost as high, per pound, as broilers, and are simply young birds generally from six to nine months old, put thru a special fattening process to make them plump and tender. They are dressed, dry-picked, wrapped in parchment paper and packed a dozen or half dozen in a box. The supply of these usually is contracted for and comparatively few are found in the open market.

Along the South Shore section in Massachusetts, where the soft roaster originated and has been grown for years, the poultrymen continue the same system of feeding from the time their chickens leave the brooders until they are sold to be dressed and marketed immediately. Cracked corn, beef scrap and water are always before them. Green food is supplied as convenient. Cabbages are used freely when grown at home. Green rye, sown in the fall on the land about the houses, is available whenever the ground is bare, and with many growers this is the main reliance for green food.

The principle upon which these South Shore roaster growers work is to make the best growth and remain soft-meated, the chickens must be kept quiet and contented, not disposed to forage or roam about much, but still inclined to take exercise enough to keep in healthy condition thru its short life. Food is before the stock at all times.—Michael K. Boyer, Atlantic Co., N. J.

PASSING EVENTS IN PICTURES



(Photo. Copyright by Underwood & Underwood.)

1—View of Training Gardens and Fields of the National Farm School, Doylestown.
2—Abraham Krotoshinsky, hero who saved the Lost Battalion, studying farming at the National Farm School.
3—Baby John Porter Simmons, of Washington, D. C.
4—The latest method of inflating balloons.
5—Ashton and David Baker enjoy the sand at Scarborough Beach, Narragansett Pier.
6—The start of the Shamrock IV and the Resolute in the second race.
7—Terribly disappointed 'cause his melon's green.
8—Sword worn by Benjamin Franklin during visit to France.
9—Sir Thomas Lipton telling Miss Laura Ehrlich about the yacht races.
10—Miss Helen Meany making a high dive at Lake Hopatcong, N. J.

Whispering Smith

by Frank H. Spearman

CHAPTER XXIII

At the River

(Continued from Last Week.)

"Some of my men were free," continued McCloud; "I switched some mattresses and sacks around the Y, thinking they might come in play here for you at the bend. They are at your service if you think you need them."

"Need them!" Lance swore fiercely and from the bottom of his heart. He was glad to get help from any quarter and made no bones about it. Moreover, McCloud lessened the embarrassment by explaining that he had a personal interest in holding the channel where it ran, lest a change above might threaten the approaches already built to the bridge; and Whispering Smith, who would have been on terms with the catfish if he had been flung into the middle of the Crawling Stone, contributed at once, like a re-enforced spring, to the ease of the situation.

Lance again took off his hat and wiped the sweat of anxiety from his dripping forehead. "Whatever differences of opinion I may have with your damned company, I have no lack of esteem personally, McCloud, for you, sir, by Heaven! How many men did you bring?"

"And whatever wheels you Crawling Stone ranchers may have in your heads on the subject of irrigation," returned McCloud evenly, "I have no lack of esteem personally, Mr. Dunning, for you. I brought a hundred."

"Do you want to take charge here? I'm frank, sir; you understand this game and I don't."

"Suppose we look the situation over; meantime, all our supplies have to be brought across from the Y. What should you think, Mr. Dunning, of putting all the teams you can at the end of the work?"

"Every man that can be spared from the river shall go at it. Come over here and look at our work and judge for yourself."

They rode to where the forces assembled by Lance were throwing up embankments and riprapping. There was hurried running to and fro, a violent dragging about of willows, and a good deal of shouting.

Dunning, with some excitement, watched McCloud's face to note the effect of the activity on him, but McCloud's expression, naturally reserved, reflected nothing of his views on the subject. Dunning waved his hand at the lively scene. "They've been at it all night. How many would you take away, sir?"

"You might take them all away, as far as the river is concerned," said McCloud after a moment.

"What? All?"

"They are not doing anything, are they, but running around in a circle? And those fellows over there might as well be making mud pies as riprapping at that point. What we need there is a mattress and sandbags—and plenty of them. Bill," directed McCloud in an even tone of business as he turned to Dancing, "see how quick you can get your gangs here with what sacks they can carry and walk fast. If you will put your men on horses, Mr. Dunning, they can help like everything. That bank won't last a great while the way the river is getting under it now." Dancing wheeled like an elephant on his bronco and clattered away through the mud. Lance Dunning, recovering from his surprise, started his men back for the wagons, and McCloud, dismounting, walked with him to the water's edge to plan the fight for what was left of the strip in front of the alfalfa fields.

When Whispering Smith got back to the house he was in good humor. He joined Dicksie and Marion in the dining-room, where they were drinking coffee. Afterward Dicksie ordered horses saddled and the three rode to the river. Up and down the bank as far as they could see in the misty rain, men were moving slowly about—more men, it seemed to Dicksie, than she had ever seen together in her life. The confusion and the noise had disappeared. No one appeared to hurry, but everyone had something to do, and, from the gangs who with sledges were sinking "deadmen" among the trees to hold the cables of the mattress that was about to be sunk, and the Japs who were diligently preparing to float and load it, to the men that were filling and wheeling the sandbags, no one appeared excited. McCloud joined the visitors for a few moments and then went back to where Dancing and his men on life-lines were guiding the mattress to its resting-place. In spite of the gloom of the rain, which Whispering Smith said was breaking, Dicksie rode back to the house in much better spirits with her two guests; and when they came from luncheon the sun, as Smith had predicted, was shining.

"Oh, come out!" cried Dicksie, at the door. Marion had a letter to write and went upstairs, but Whispering Smith followed Dicksie. "Does everything you say come true?" she demanded as she stood in the sunshine.

She was demure with light-heartedness and he looked at her approvingly. "I hope nothing I may say ever will come true unless it makes you happy," he answered lightly. "It would be a shame if it did anything else."

She pointed two accusing fingers at him. "Do you know what you promised last night? You have forgotten already! You said you would tell me why my leghorns are eating their feathers off."

"Let me talk with them."

"Just what I should like. Come on!" said Dicksie, leading the way to the chicken-yard. "I want you to see my bantams too. I have three of the dearest little things. One is setting. They are over the way. Come see them first. And, oh, you must see my new game chickens. Truly, you never saw anything as handsome as Caesar — he's the rooster; and I have six pullets. Caesar is perfectly superb."

When the two reached the chicken-houses Dicksie examined the nest where she was setting the bantam hen. "This miserable hen will not set," she exclaimed in despair. "See here, Mr. Smith, she has left her nest again and is searching around on the ground. Isn't it a shame? I've tied a cord around her leg so she couldn't run away, and she is hobbling around like a scrub pony."

"Perhaps the eggs are too warm," suggested her companion. "I have had great success in cases like this with powdered ice—not using too much, of course; just shave the ice gently and rub it over the eggs one at a time; it will often result in refreshing the attention of the hen."

Dicksie looked grave. "Aren't you ashamed to make fun of me?"

Whispering Smith seemed taken aback. "Is it really serious business?"

"Of course."

"Very good. Let me watch this hen for a few minutes and diagnose her. You go on to your other chickens. I'll stay here and think."

Dicksie went down through the yards. When she came back, Whispering Smith was sitting on a cracker-box watching the bantam. The chicken was making desperate efforts to get off Dicksie's cord and join its companions in the runway. Smith was eying the bantam critically when Dicksie rejoined him. "Do you usually," he asked, looking suddenly up, "have success in setting roosters?"

"Now you are having fun with me again."

"No, by Heaven! I am not."

"Have you diagnosed the case?"

"I have, and I have diagnosed it as a case of mistaken identity."

"Identity?"

"And misapplied energy, Miss Dicksie, you have tied up the wrong bird. This is not a bantam hen at all; this is a bantam rooster. Now that is my judgment. Compare him with the others. Notice how much darker his plumage is—it's the rooster," declared Whispering Smith, wiping the perplexity from his brow.

"Don't feel bad, not at all. Cut him loose, Miss Dicksie—don't hesitate; do it on my responsibility. Now let's look at the cannibal leghorns—and great Caesar."

CHAPTER XXIV

Between Girlhood and Womanhood

About nine o'clock that night Puss ushered McCloud in from the river. Dicksie came running downstairs to meet him. "Your cousin insisted I should come up to the house for some supper," said McCloud dryly. "I could have taken camp fare with the men. Gordon stayed there with him."

Dicksie held his hat in her hand, and her eyes were bright in the firelight. Puss must have thought the two made a handsome couple, for she lingered, as she started for the kitchen, to look back.

"Puss," exclaimed her mistress, "fry a chicken right away!" A big one, Puss! Mr. McCloud is very hungry, I know. And be quick, do! Oh, how is the river, Mr. McCloud?"

"Behaving like a lamb. It hasn't fallen much, but the pressure seems to be off the bank, if you know what that means?"

"You must be a magician! Things changed the minute you came!"

"The last doctor usually gets credit for the cure, you know."

"Oh, I know all about that. Don't you want to freshen up? Should you mind coming right to my room? Marion is in hers," explained Dicksie, "and I am never sure of Cousin Lance's—he has so many boots."

When she had disposd of McCloud she flew to the kitchen. Puss was starting after a chicken. "Take a lantern, Puss!" whispered Dicksie vehemently.

"No, indeed; dis nigger don' need no lantern fo' chicken, Miss Dicksie."

"But get a good one, Puss, and make haste, do! Mr. McCloud must be starved! Where is the baking powder? I'll get the biscuits started."

Puss turned fiercely. "Now look-a heah, you' can't make biscuits! Yo' jes' go se' down wif dat young gen'm'n! Jes' lemme lone, ef you please! Dis ain't de firs' time I killed chickens, Miss Dicksie, an' made biscuits. Jes' clair out an' se' down! Place f'r young ladies is in de parlor! Ol' Puss can cook supper f'r one man yet —ef she has to!"

"Oh, yes, Puss, certainly, I know, of course; only, get a nice chicken!" and with the parting admonition Dicksie, smoothing her hair wildly, hastened back to the living-room.

But the harm was done. Puss, more excited than her mistress, lost her head when she got to the chicken-yard, and with sufficiently bad results. When Dicksie ran out a few moments afterward for a glass of water for McCloud, Puss was calmly wiping her hands, and in the sink lay the quivering form of young Caesar. Dicksie caught her favorite up by the legs and suppressed a cry. There could be no mistake. She cast a burning look on Puss. It would do no good to storm now. Dicksie only wrung her hands and returned to McCloud.

He rose in the happiest mood. He could not see what a torment Dicksie was in, and took the water without asking himself why it trembled in her hand. Her restrained manner did not worry him, for he felt that his fight at the river was won, and the prospect of fried chicken composed him. Even the long hour before Puss, calm and inviting in a white cap and apron, appeared to announce supper, passed like a dream. When Dicksie rose to lead the way to the dining-room, McCloud walked on air; the high color about her eyes intoxicated him. Not till half the fried chicken, with many compliments from McCloud, had disappeared, and the plate had gone out for the second dozen biscuits, did he notice Dicksie's abstraction.

"I'm sure you need worry no longer about the water," he observed reassuringly. "I think the worst of the danger is past."

Dicksie looked at the table-cloth with wide-open eyes. "I feel sure that it is. I am no longer worrying about that."

"It's nothing I can do or leave undone, is it?" asked McCloud, laughing a little as he implied in his tone that she must be worrying about something.

Dicksie made a gesture of alarm. "Oh, no, no; nothing!"

"It's a pretty good plan not to worry about anything."

"Do you think so?"

"Why, we all thought so last night. Heavens!" McCloud drew back in his chair. "I never offered you a piece of chicken! What have I been thinking of?"

"Oh, I wouldn't eat it anyway!" cried Dicksie.

"You wouldn't? It is delicious. Do have a plate and a wing at least."

"Really, I could not bear to think of it," she said pathetically.

He spoke lower. "Something is troubling you. I have no right to a confidence, I know," he added, taking a biscuit.

Her eyes fell to the floor. "It is nothing. Pray, don't mind me. May I fill your cup?" she asked, looking up. "I am afraid I worry too much over what has happened and can't be helped. Do you never do that?"

McCloud, laughing wretchedly, tore Caesar's last leg from his body. "No indeed. I never worry over what can't be helped."

They left the dining-room. Marion came down. But they had hardly seated themselves before the living-room fire when a messenger arrived with word that McCloud was wanted at the river. His chagrin at being dragged away was so apparent that Marion and Dicksie sympathized with him and laughed at him. "'I never worry about what can't be helped,'" Dicksie murmured.

He looked at Marion. "That's a shot at me. You don't want to go down, do you?" he asked ironically, looking from one to the other.

"Why, of course I'll go down," responded Dicksie promptly. "Marion caught cold last night, I guess, so you will excuse her, I know. I will be back in an hour, Marion, and you can toast your cold while I'm gone."

"But you musn't go alone!" protested McCloud.

Dicksie lifted her chin the least bit. "I shall be going with you, shall I not? And if the messenger has gone back I shall have to guide you. You never could find your way alone."

"But I can go," interposed Marion, rising.

"Not at all; you can not go!" announced Dicksie. "I can protect both Mr. McCloud and myself. If he should arrive down there under the wing of two women he would never hear the last of it. I am mistress here still, I think; and I sha'n't be leaving home, you know, to make the trip!"

McCloud looked at Marion. "I never worry over what can't be helped—though it is dollars to cents that those fellows don't need me down there any more than a cat needs two tails. And how will you get back?" he asked, turning to Dicksie.

"I will ride back!" returned Dicksie loftily. "But you may, if you like, help me get my horse up."

"Are you sure you can find your way back?" persisted McCloud.

Dicksie looked at him in surprise. "Find my way back? she echoed softly. "I could not lose it. I can ride over any part of this country at noon or at midnight, asleep or awake, with a saddle or without, with a bridle or without, with a tril or without. I've ridden every horse that has ever come on the Crawling Stone Ranch. I could ride when I was three years old. Find my way back?"

The messenger had gone when the two rode from the house. The sky was heavily overcast, and the wind blew such a gale from the south and west that one could hardly hear what the other said. McCloud could not have ridden from the house to the barn in the utter darkness, but his horse followed Dicksie's. She halted frequently on the trail for him to come up with her, and after they had crossed the alfalfa fields McCloud did not care whether they ever found the path again or not. "It's great, isn't it? he exclaimed, coming up to her after opening a gate in the dark. "Where are you?"

"This way," laughed Dicksie. "Look out for the trail here. Give me your hand and let your horse have his head. If he slips, drop off quick on this side." McCloud caught her hand. They rode for a moment in silence, the horses stepping cautiously. "All right now," said Dicksie; "you may let go." But McCloud kept his horse up close and clung to the warm hand. "The camp is just around the hill," murmured Dicksie, trying to pull away. "But of course if you would like to ride in holding my hand you may!"

"No," said McCloud, "of course not —not for worlds! But, Miss Dicksie, couldn't we ride back to the house and ride around the other way into camp? I think the other way into the camp—say, around by the railroad bridge—would be prettier, don't you?"

For answer she touched Jim lightly with her lines and his spring released her hand very effectively. As she did so the trail turned and the camp-fire, whipped in the high wind, blazed before them.

Whispering Smith and Lance Dunning were sitting together as the two galloped up. Smith helped Dicksie to alight. She was conscious of her color and that her eyes were now unduly bright. Moreover, Whispering Smith's glance rested so calmly on both McCloud's face and her own that Dicksie felt as if he saw quite through her and knew everything that had happened since they left the house.

Lance was talking to McCloud. "Don't abuse the wind," McCloud was saying. "It's our best friend to-night, Mr. Dunning. It is blowing the water off-shore. Where is the trouble?" For answer Dunning led McCloud off toward the Bend and Dicksie was left alone with Whispering Smith.

He made a seat for her on the windward side of the big fire. When she had seated herself she looked up in great contentment to ask if he was not going to sit down beside her. The brown coat, the high black hat, and the big eyes of Whispering Smith had already become a part of her mental store. She saw that he seemed preoccupied, and sought to draw him out of his abstraction.

"I am so glad you and Mr. McCloud are getting acquainted with Cousin Lance," she said. "And do you mind my giving you a confidence, Mr. Smith? Lance has been so unreasonable about this matter of the railroad's coming up the valley and powwowing so much with lawyers and ranchers that he has been forgetting about everything at home. He is so much older than I am that he ought to be the sensible one of the family, dont' you think so? It frightens me to have him losing at cards and drinking. I am afraid he will get into some shooting affair. I don't understand what has come over him, and I worry about it. I believe you could influence him if you knew him."

"What makes you think that?" asked Whispering Smith, but his eyes were on the fire.

"Because these men he spends his time with in town—the men who fight and shoot so much—are afraid of you. Don't laugh at me. I know it is quite true in spite of their talk. I was afraid of you myself until——"

"Until we made verse together."

(Continued Next Week.)

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Markets

PHILADELPHIA PRODUCE

—August 9, 1920.

With the season on the nearby Pennsylvania and New Jersey vegetables now at its height, the market is abundantly supplied with all kinds of seasonable vegetables, and in some instances such as cabbage, squash and onions there is almost a glut on the market and low prices are prevailing on very many commodities, so that the housewife who uses ordinary care and prudence in making her purchases does not have to complain so much about the High Cost of Living. Of course, there are some kinds of vegetables, such as peas and sweet potatoes, that are not exactly in season at this time and such vegetables are bringing high prices. Potatoes have been gradually seeking lower levels and the prices now prevailing are the lowest that they have have been in a good many months. New Jersey grown potatoes are selling today at 90c@$1 per ⅝-basket for the No. 1s or primes, while the smaller or No. 2s are selling around 50@60c per basket. There were 13 cars of Eastern Shore barrel potatoes here this morning, the best of which sold at $4.25@4.75 per barrel, with the culls down to $1.50@2 per barrel.

The season on green beans reached its height some time past, but there are some still being brought in which are selling from 50c@$1 per ⅝-basket as to condition, but many of them are getting rather old. Beets are very plentiful and the best are selling at 2@2½c per bunch, and when the tops are on and they are packed in hampers sell at 50@75c per hamper. Cabbage is too plentiful, and the dealers find it hard to sell their supplies at 10@25c per basket, or at 65c@$1 per barrel, the price of the barrel being included in these quotations. Carrots are also in fair supply and selling at 2@3c per bunch or 75c@$1 per ⅝-basket loose. Celery is also plentiful and with the warm weather is meeting a rather slow demand at 30@75c per bunch as to size of the bunches, while the celery stalks are selling at 5@10c per bunch. Corn is quite plentiful, but is meeting a very active demand at $1@1.50 per ⅝-basket, or when packed in bags sells at $3@4 per 100 ears. Cucumbers continue in abundant supply and sell at mostly 25@50c per ⅝-basket, while the smaller cucumbers for pickling purposes bring from 65c@$1 per ⅝-basket. Eggplants continue to bring the good price of mostly $1.25@1.50 per ⅝-basket.

Lettuce comes mostly from New York State at this time and is a little higher than it was a week ago, selling mostly at $1.50@2 per box containing 2 dozen heads. Lima beans are also meeting a good demand, but as they are not as yet any too plentiful are selling from $1.75@2.25 per ⅝-basket, but these prices will probably seek lower levels as supplies get more plentiful. Onions continue in abundant supply and the yellows are selling mostly around 45@50c per ⅝-basket. As the pickling season approaches, the white onions will be wanted and at the present time these are selling from $1.75@3 per bushel hamper, as to size. New Jersey okra is showing the wide range of $1.25@2.25 per ⅝-basket. Peas are a very scarce commodity on the market at this writing, but as they are not what might be termed fancy are commanding from $2.25@2.50 per bushel. Peppers are plentiful and selling generally from 45@60c per ⅝-basket. Scallions are meeting a rather indifferent demand at 1@2c per bunch. Squash has been drug on the market for the past two weeks and the market does not clean up the supplies at the low price of 10@25c per ⅝-basket on the white squash with the long green squash selling from 10@35c per basket.

Tomatoes are also right at the height of the season and selling at very reasonable prices, the early tomatoes selling at 30@50c per basket, and the second earlys at mostly 60@75c per basket with now and then some extra fancy at 75c@$1 per basket and the culls as low as 15@25c per basket. Turnips are not wanted very much during the hot weather, and are therefore selling at rather low prices ranging from 25@50c per ⅝-basket. Parsley is also plentiful and the market remains unchanged at $1@1.25 per hamper, there is still a little watercress coming which sells around 3c per bunch mostly.

Fruits—Fruits like vegetables for the most part are in abundant supply and reasonable prices are prevailing on many varieties of fruits. Apples for instance have been in very free supply from New Jersey and Delaware points. Many of the farmers were also shipping their culls and windfall apples to the market and for a short time there was a glut of these poor apples on the market. At the present writing however this surplus of poor apples has been cleaned up, and the market is firmer although at the same time moderate prices are prevailing. Good New Jersey apples are now selling at 60c@$1 per ⅝-basket and culls at 25@50c per basket. Delaware bushel hampers sell mostly at $1@1.75 per hamper, with No. 2s a 50@75c. Some fancy Pennsylvania red variety apples were here this morning and sold at $1.50@2.50 per bushel. Delaware peaches are also arriving quite freely as well as New Jersey peaches and prices ranging from $1.00@1.75 per basket on No. 1 peaches with No. 2s at 50@75c per basket. Blackberries are falling off in supply and the market is firm at 25@30c per quart. Huckleberries show a wide range in condition and prices are therefore showing the wide range of 15@30c per quart, with most sales probable at 22@25c per quart.

New Jersey plums have been on the market and sold at $1@1.50 per ⅝-basket. Cantaloupes from Delaware and Maryland are now quite plentiful, there being some nine cars here this morning which sold at $3@3.75 per crate. New Jersey's are gradually increasing in supply. No. 1 New Jerseys sold this morning at $2@2.25 per ⅝-bushel basket and culls at 75c@1.25. As the New Jersey supply gradually increases these prices will gradually ease off and lower prices on cantaloupes will no doubt prevail next week.

Poultry—Since our last week's report the market has been ruling very firm and active on live poultry and somewhat higher prices are prevailing, especially on heavy fowls and fancy choice sizes of broiling chickens. Heavy fowl are now selling at 40@42c per pound and light to medium weight fowls at 37@39c, with the Leghorn fowls which are the least desirable selling at 36@37c per pound. Broiling chickens have advanced about 2c per pound since our last report, and today fancy broilers are selling at 45@60c per pound with the Leghorn broilers at 38@43c per pound. Old ducks are firm at 20@32c per pound and spring ducks steady at 32@35c per pound.

Eggs—Eggs when showing good quality and condition are meeting a good active market at firm prices, but many eggs are showing the defects incident to the hot weather. Pennsylvania and other nearby current receipts are bringing 49@50c per dozen and firsts are selling at 52@53c per dozen, while candled and selected eggs are jobbing out around 60c per dozen. Western firsts are quotable at 50c per dozen with extra firsts at 52@53c per dozen.

BALTIMORE PRODUCE

—Aug. 7, 1920.

Butter—Creamery, Western Separator, extras, 58@59c; do, firsts 57@58c; do, prints, ½ pound, extras, 60@61c; do, firsts, 57@59c; do, 1 pound, extras, 60@61c; do, firsts, 57@59c; nearby creamery, extras, 48@50c; do, firsts, 46@47c; dairy prints, Maryland, Pennsylvania and Virginia, extras, 43@44c; do, firsts, 42@43c; store-packed, firsts, 41c.

Eggs—Western Maryland, Pennsylvania and nearby, firsts, 47c; Eastern Shore, Maryland and Virginia, firsts, 47c; Western (Ohio), firsts, 47c; West Virginia, firsts, 45@46c; Southern (North Carolina), firsts, 44@45c.

Live Poultry—Chickens, spring, under 1¼ pounds, pound, 40c; do, 1¼ to 1½ lbs., lb., 42@43c; do, 1¾ to 2 lbs., lb., 45c; do, old roosters, lb., 20@21c; do, old hens, over 4 lbs., lb., 36@37c; do, small, lb., 35c; do, white Leghorn hens, lb., 34@35c; do, young white Leghorns, 1½ lbs., lb., 42c; do, under 1½ lbs., lb., 38@40c. Ducks, white Pekins, young, lb., 36@37c; do, spring, 4 lbs. and over, lb., 35@36c; do, smaller, poor, pound, 30@34c. Pigeons, old, pair, 35@40c; do, young, pair, 35@40c.

NEW YORK PRODUCE

—Aug. 9, 1920.

Vegetables—Potatoes—L. I., bbl., $4.00@$5.00; Jy., 165-lb., $4.50a5.00; Sweets, bskt., Jy., firsts, $5.00a6.50. Beans, bskt., wax, 50c@$1.25; green, 50c@$1.25. Beets, nearby, bbl., $2.50a3.50. Carrots, nearby, 100 lbs., $2.00a3.00; nearby, basket, $1.25a1.50. Corn, Jy., 100, $1.00@4.00. Celery, crate, state, bunch, 15@75c; Jy., bunch, 15@60c. Cucumbers, Jy., basket, 50c@$1. Cabbages, L. I., bbl., 50@75c; Jy., basket, 25@30c. Cauliflowers, nearby, bbl., $1.00@2.50. Eggplants, Jy., box, $1.00@1.25. Horseradish, bbl. $25.00@30.00. Kohlrabi, 100 bunches, $1.00a2.00. Kale, bbl., nearby, 25@50c. Leeks nearby, 100, $2@4. Lima Beans, Jy., basket, $1.25@2.50. Lettuce, State, crate, 50c@$1.25; nearby, bbl., 60c@$1.50. Okra, Jy., crate, $3a4. Onions—Jy., white, $1@1.75; yellow, basket, 90c@$1.15; pickles $3@3.50. Peppers, Jy., basket, bullnose, 75c@$1; long, 75c@$1. Peas, state, bskt., $1@2; L. I., bag, 75c@$1.25; Jy., bskt., 75c@$1.25. Parsley, nearby, 100, $3@4. Romaine, nearby, bbl, $1a2; state, crate, 50c@$1.50. Rhubarb, 100 bunches, $2a3. Scallions, bunch, nearby, 100, $1@1.50. Spinach, nearby, bbl., 50c@$1. Squash, white, bbl., $2@2.50. Turnips, white, bbl., $1.50@3.50; basket, 75c@$1.50; Rutabaga, bbl., $1.25@1.75. Tomatoes, Up. Jy., box, $1@2.50; No. 2, box, 50@75c; So. Jersey, Acme, $1.25@2; Stone, $1@1.50; Grant, 75c@$1.25; No. 2 box, 25@50c; Jy., 12-qt. basket, 40@65c; Jy., carrier, 75c@$1.75.

Fresh Fruits—Apples, baskets, 65c@$2. Pears, baskets, $1.50@3.25. Peaches, crate, Jersey, $1.75@2.75. Huckleberries, per qt., 20@30c. Gooseberries, large, qt., 17@20c; small, qt., 14@15c.

Butter—Firm; receipts, 9814 tubs; creamery, higher than extras, 55@55½c; creamery extras, 92 score, 54¼@54½c; creamery firsts, 88 to 91 score, 51@54c; packing stock, current make, No. 1, 44c.

Eggs—Irregular; receipts, 13,738 cases; fresh-gathered, extra firsts, 51@53c; fresh-gathered, firsts, 47@50c; state, Pennsylvania and nearby Western hennery browns, extras, 58@62c; state, Pennsylvania and mixed colors, gathered browns and mixed colors, first to extras, 48@55c.

Cheese irregular; receipts, 6839 boxes; state, whole-milk flats, current make, white and colored specials, 27½@28½c; do average run, 25½@26½c; state, whole-milk, twins, current make, specials, 26½@27½c; do, average run, 25@26c.

Live Poultry—Weak, broilers, by freight, 43@45c; broilers, by express, 42@48c; fowls, 36c; old roosters, 24c; turkeys, 35c.

Dressed Poultry—Steady, Western broilers, fresh, 42@55c; fowls, fresh, 26@42c; roosters, fresh, 26@27c; turkeys not quoted.

YORK PRODUCE MARKETS

—Aug. 9, 1920.

The past week saw the largest quantities of home-raised produce on the market that has been on display for several years. All lines with the exception of corn took a heavy drop. Tomatoes that sold readily for 8@10c each could not be sold for 8c a box. Apples were also in over-supply, there being an extra large quantity of wormy and cull stock.

Eggs—48@50c per dozen.

Butter—Country, 60@65c lb.; separator, 65@75c lb.; milk, 13c qt.

Poultry—Hens, 25@30c lb.; springers, $1@1.75 a pair.

Vegetables—Potatoes, 30@40c ½ peck; cabbage, 5@10c head; lettuce, 10c head; beets, 5c bunch; onions, 1c box; radishes, 6c bunch; rhubarb, 5c bunch; lima beans, 25c pint; soup beans, 30c qt.; beans, 10@12c ½ peck; peas, 25@30c ¼-peck; corn, 40@50c per dozen.

Fruit—Apples, 5@50c ½-peck; 5@15c per box; plums, 25c box; pears, 5@10c box; peaches, 10@15c box; blackberries, 25@30c box; tomatoes, 5@15c box; 10@35c per ½-peck.

Retail Grain Market—Wheat, $3 per bu.; corn, $2; oats, $1.25; rye, $1.75; bran, $3 per cwt.; middlings, $4 per cwt.

Wholesale Grain Market—Wheat, $2.40; corn, $1.50; oats, 80@90c; rye, $1.50; bran, $55 per ton; middlings, $65 per ton.

PITTSBURGH PRODUCE

—Aug. 7, 1920.

Butter, Eggs and Cheese—Butter, prints, lb., 58@58½c; tubs, lb., 57@57½c; country, roll, 38@40c. Eggs, select, 51@52c; do, at mark, 48@49c. Cheese, Wis. Swiss, 58@59c; N. Y., cream, 32½@33c; Longhorn, 31@32c.

Vegetables—Corn, h. g. bushel, $2.75@3; beans, 75c@$1; garlic, 25@30c; cabbage, Ohio, box, $2.25@2.50; do, h. g., bushel, 90c@$1; celery, crate, $3.50@4.75; lettuce, head, doz., 35@50c; peppers, $1.75@2; onions, box, $1.25@1.50; do, 100 lbs., $2@2.50; do, young, dozen, 15@18c; spinach, bushel, 50@75c; peas, hamper, $1.50@2; potatoes, $5.50@6.25; do, sweet, hamper, $3.50@4; Radishes, 25@30c; tomatoes, home grown, $1.50@1.75; do, Marietta, basket, $1.75@2; parsley, 30@40c; eggplant, $2.50@3; cucumbers, hamper, 90c@$1.25.

Fruits—Apples, do, green, bbl., $4.50@7; do, bu., $1@2.75; currants, $5@6; do, basket, 40@65c; cherries, do, h. g., $6@7; do, basket, 40@60c; peaches, $3.50@4.75; dewberries, $11.50@12; gooseberries, crate, $9@11; huckleberries, 20-lb. bask., $2.75@3.25; do, crate, $7.50@8; raspberries, do, b., cr., $12@14.

LANCASTER PRODUCE

—Aug. 9, 1920.

A sudden increase in supply caused a decrease in prices for peaches here today. Eggs, during the early trading, jumped to 53c but later declined to 50c under an unsteady demand. Corn was a drug on the market, but farmers only slightly shaded their prices. Potatoes, offered in large quantities reached the season's lowest figures. The quotations:

Butter and Eggs—Fresh eggs, 50@53c per doz.; duck eggs, 55c per doz.; goose eggs, 6@7c each; creamery butter, 75c per lb.; country butter, 70a75c per lb.

Poultry—Dressed old chickens, $2a2.50 each; dressed young chickens, $1.75a2 each.

Vegetables—Rhubarb, 5c per bunch; beans, 10c per ½-peck; peas, 40c per ½-peck; beets, 5c per bunch; lima beans, 35c per pint; cauliflower, 15a25c per head; cabbage, 6a10c per head; sweet potatoes, 50c per ½-peck; white potatoes, 30@40c per ½-peck; corn, 20@40c per dozen ears; lettuce, 15@20c per head.

Fruit—Apples, 25@40c per ½-peck; cantaloupes, 8@10c each; watermelons, 50@75c each; pears, 30c per ½-peck.

PHILADELPHIA LIVESTOCK

August 9, 1920.

Receipts for the week ending Aug. 7, 1920, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Totals for week	2093	8795	7114
Previous week	1923	7474	5035

Calves—Receipts of calves were 2949 head against 2561 head previous week.

Beef Cattle—Trade slow and prices of steers and bulls slightly lower. Quotations were as follows: Steers, good to choice, $14.50@16; fair to good, $13@14.50; common to fair, $11@13; cows, dairy, good to choice, 8½@10c; do, fair to good, 7@8½c; bulls, 7@10½c; calves extra to choice, $19@19.50; fair to good, $16@18; common, $11@13; Tennessee, $15@17; other southerns, $6@10.

Sheep and Lambs dull and weak, with lambs showing a decline. Quotations: Sheared sheep, wethers, extra, $9.50@10; do, good to choice, $8@9; do, medium, $6.50@7.50; do, common, $2@5; ewes, heavy, fat, $7@8; lambs, spring, choice, $14.50@15; medium, $12@13; common, $9@11.

Hogs—Steadily held. We quote: Best western, $18.50a19; good, nearby, $17@17.50.

City Dressed Stock in moderate request at revised prices. We quote as follows: Steers, 20@28c; heifers, 18@26c; cows, choice, 18@21c; cows, light, 12@16c; calves, city dressed, choice, 29@31c; calves, country dressed, 25@27c; lambs, spring choice, 30@33c; sheep, 15@25c; hogs, 24@25c.

LIVESTOCK MARKETS

LANCASTER

—Aug. 9, 1920.

Cattle—Receipts, 2805 head; market dull; prices steady; best grades, $17.25@17.75; 15.35; fair to good, $13.55@14.35; medium to fair, $11.75@12.75; common to medium, $9.75@11.25; smooth and fat bulls, $9.85@11.35; medium to good, $8.75@9.75; common to medium, $9.25@10.25; stock bulls, $7.75@8.85; calves, good to prime, $17.35@18; medium to good, $14.25@15.75; common to medium, $12.75@13.75.

Hogs—Receipts, 127 head; market dull; prices steady; best grades, $17.25@17.75; lightweights, $16.50@17; roughs, $12@14; stags to sows, $9@10.

Sheep—Receipts, 512 head; market quiet, 10c per lb.

PITTSBURGH

Cattle—Steady, supply light; prime, $15.25@15.75.

Sheep—Steady, supply light; prime wethers, $8.50@9.50; culls and common, $2@4; lambs, $7@14; veal calves, $17@18.

Hogs—Slow, supply, 20 double decks; prime heavies, $15.75@16; medium and heavy yorkers, $17; light yorkers, $16.25@17; pigs, $16@16.25; roughs, $13@13.50.

NEW YORK

Cattle—Receipts, 625; no trading.

Calves—Receipts, 1130; steady; veals, $14@20; culls, $12@13; western calves, $9@11.50.

Sheep and Lambs—Receipts, 3490; no trading in sheep; lambs firm at $10@16.50; culls, $7@8.

Hogs—Receipts, 2275; no trading.

EAST BUFFALO

Cattle—Receipts, 800; slow.

Calves—Receipts, 300; fairly active; $1 lower, $6@19.

Hogs—Receipts, 1600; steady to 5c higher; heavy, $16@16.50; mixed, $17.20@17.40; yorkers, light yorkers, and pigs, $17.25@17.40; roughs, $13@13.50; stags, $8@10.

Sheep and Lambs—Receipts, 600; steady, unchanged.

CHICAGO

Cattle—Receipts, 1500. Market, compared with a week ago: Strictly choice handyweight steers and best yearlings strong; choice heavy beeves slow; common, medium and good steers, 25c to 50c lower; weighty cows and best heifers, 50c higher; medium and common kinds steady to higher; bologna bulls, 25c to 50c higher; others steady to 25c higher; veal calves, $1 to $1.50 lower; good stockers, 50c lower; undesirable kinds, 50c to 75c lower; good stockers, 50c lower.

Hogs—Receipts, 3000; light and light butchers steady, with yesterday's average; others mostly 10c to 15c higher; top, $15.30; bulk, light and butcher hogs, $15.35@16.25; bulk, packing sows, $13.90@14.25; pigs, steady to 15c higher; bulk, desirable kinds, $14.90@15.40.

Sheep—Receipts, 4000; market steady. Receipts direct compared with week ago: Western fat and feeding lambs, 75c to $1 lower; native lambs, 25c to 50c lower; fat sheep mostly steady; breeding ewes strong to 25c higher.

PHILADELPHIA HAY AND GRAIN

August 7, 1920.

Baled Hay and Straw—Receipts, 192 tons of hay and 3 cars of straw. Trade slow and market barely steady. Timothy hay, No. 1, none here; No. 2, $38@39; No. 3, $31@33; sample, $25@40; no grade, $18@24. Clover-mixed hay, light mixed, $35@37; No. 1, mixed, $33@34. Straw—No. 1 straight rye, $16@16.50; No. 2 do, $15@15.50; No. 1 tangled rye, $15@15.50; No. 2 do, $14@14.50; No. 1 wheat straw, $12.50@13; No. 2 do, $11.50@12; No. 1 oat straw, $13.50@14; No. 2 do, $12.50@13.

Bran—Dull and weak to sell. Car lots, including sacks: Soft winter bran, western, in 100-lb. sacks, per ton, $51@51.50; spring bran, in 100-lb. sacks, per ton, $50@50.50.

Corn—No. 2, yellow, $1.60@1.70.

Wheat—No. 2 red winter, $2.70@2.80; No. 2 red winter, garlicky, $2.60@2.70.

Oats—No. 2 white, 97@98c; No. 3, white, 96@97c.

NEW YORK HAY AND GRAIN

August 7, 1920.

Feed—The market for mill feed continues quiet and the undertone is easy. Mills show a disposition to shade prices in order to induce business, especially for bran, but buyers are indifferent to offerings.

Quotations: City feed bran, $54; middlings, $56, in 100-pound sacks; red dog, $79, nominal, in 100-pound sacks; Western, spring bran $50; standard middlings, $59; flour middlings, $69; red dog, $76, all in 100-pound sacks, 30-day shipment. Oat feed, $37; rye middlings, $58; white hominy feed, $67.50, all in 100-pound sacks. Cottonseed oil meal, $67; linseed oil meal, $62, in 100-pound sacks.

Hay and Straw—There is only a little hay arriving by rail but there are ten canal boats at Pier 6, East River, and four more boats arrived on Friday; these are not being unloaded at present. There is little demand and the market closes barely steady. Rye straw scarce and rather firm. Some accumulation of oat and wheat straw and no demand for it.

Hay—Large bales. Timothy, No. 1, $40@45; No. 2, $33@41; No. 3, $29@33; shipping, $25@29; no grade, $18@25. Clover mixed, fancy, $34@40; No. 1, $28@33; No. 2, $24@28.

Straw—Large bales, No. 1, rye, $19; No. 1, oat, $10@11; No. 1 wheat, $10@11.

PHILADELPHIA DAIRY MARKET

August 7, 1920.

Butter—Receipts 10,067 tubs. There was not much wholesale trading, as usual, on Saturday, and the general market showed no important change. Quotations: Fresh, solid-packed creamery, high-scoring goods, 56@58c, the latter for jobbing sales; extra, 55c; do, extra firsts, 54c; firsts, 49@52c; seconds, 45@48c; lower grades, 42@44c; sweet creamery, choice to fancy, 57@59c; fair to good, 49@56c; ladle-packed, as to quality, 44@47c; packing stock, 39@44c; fancy brands of nearby prints were jobbing at 65@67c; good to choice, 57a64c; fair, 54@56c.

Cheese—Steadily held but quiet. Quotations: New York, whole milk, current make, fancy, firsts, 27½@28c; common to fair, 24@27c; Longhorns, 26½@27½c; single Daisies, 26½@27½c; jobbing sales of fancy goods, 29@30c.

INTERSTATE MILK PRICES

August 9, 1920.

Philadelphia milk prices in effect August first are as follows: For three per cent milk, $4.20 per cwt., or basic quantity price per qt. of 9.1c. For 3.5 per cent milk, $4.40 per ctw., or basic quantity price of 9.6c per qt. For four per cent milk, $4.60 per cwt., basic quantity price of 10c per qt. The price for surplus milk will be determined and sent out at the end of the month. When milk is not tested the price f. o. b., Philadelphia, is to be 10c per qt.

NEW YORK MILK MARKET

—Aug. 9, 1920.

The market was in good shape last week and supply no more than required to meet the demand. Manufacturing has about ceased and surplus almost nominal. The rate for August for 3 per cent. milk in 200-mile zone is $3.35 per 100 lbs.; 3.6 per cent milk is $3.50 and 4 per cent milk, $3.75. Grade A bottled retails at 20c per quart; grade B bottled is 17@18c; loose milk, grade B, selling in stores at 13c.

Receipts of milk and cream in 40-quart cans for the week ending August 7, 1920, were as follows:

Railroad.	Milk	Cream
Erie	39,407	4,723
Susquehanna	6,684	112
West Shore	12,110	2,366
Lackawanna	52,115	3,028
New York Central (long haul)	192,314	5,471
Ontario	41,760	1,977
Lehigh Valley	60,116	2,010
New Haven	6,140	68
Pennsylvania	12,122	462
Other Sources	5,500	200
Totals	428,268	20,417
Same week last year	397,258	21,724

Facts in BLACK & WHITE

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Everything sold. Booking orders for gilts bred for fall farrow, and pigs for Pig Club work only.
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BRED SOWS AND GILTS. I have some very fine Berkshire sows and gilts bred to farrow Sept. 1st. Also a few choice open gilts. Anselm B. Kirsch, Highland Stock Farm, Nicktown, Pa.

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Quality Growthiness Prolificacy
We guarantee satisfaction.
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Special Sale REGISTERED DUROC SOWS bred for Summer farrow, $65.00 each, registered and express paid.
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REG. O. I. C'S, all ages. Open and bred gilts at prices to move them.
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Big Type Poland Chinas All ages. Write your wants
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Nelson's Berkshires 4 months old pigs, $25. With size and quality; guar'd to please. W. O. Nelson, Jr., Marshallton, Del.

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Hampshire Hogs, bred sows, and 8 and 10 weeks old pigs
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Indiana, Pa., July 7, 1920.
Please discontinue my ad for the present as I am about sold out. Had plenty of inquiries from Penna. Farmer readers for all the O. I. C.'s I could spare this season. Thanks very much.
EDWARD N. LYDICK

TELL the advertiser you saw adv. in Pennsylvania Farmer.

BIG DROP IN WOOL CONSUMPTION

A drop in wool consumption of nearly 17,000,000 pounds from the average for the six months of 1920 is seen in figures for June, 1920, of the Bureau of Markets. According to the report, 46,000,000 pounds of wool, grease wool equivalent, entered into manufacture during that month, compared with 55,000,000 pounds for the corresponding month last year. Summaries for preceding months of 1920 have shown the following amounts used: January, 72,700,000 lbs.; February, 63,700,000 lbs.; March, 67,900,000 lbs.; April, 66,900,000 lbs.; May, 58,600,000 lbs.

The sharp decrease in wool consumption is a result of the curtailment of operations which began in the tetile manufacturing industry in May and became more extensive in June. Many mills have been running on a short-week schedule, while some have suspended operations entirely, the suspensions in many cases being for an indefinite period. Lack of orders, cancellations and deferred shipments are given as primary causes for the unstabe situation.

GRADING ADDS TO FARMER'S PROFITS

When a farmer orders a box of bolts of a certain make and size he does not expect to find a thin layer of the bolts specified on the top of the box and assorted bolts underneath. In the world of commerce a manufacturer who pursued such practices would soon be bankrupt.

The same principle applies to the sale of farm products. Before sending produce to market the farmer should sort it as to quality and size. The Bureau of Markets from time to time has recommended grade specifications for various products, and, wherever these recommendations have been followed satisfaction and increased monetary returns have generally resulted. For instance, it is estimated that in 1919 the potato growers in Virginia increased their profit a half million dollars by grading their produce. Similar results are being obtained in other States.

PENNA. FRUIT ESTIMATES

Apples.—Reports from every county in the State show that the prospect for apples on July 1st was 86 percent of a normal or full crop. This forecasts a total production of 11,488,000 bushels compared with 7,614,000 bushels last year.

Peaches.—The outlook for peaches was 78 percent and indicates a total production of 1,550,000 bushels. The total production last year was estimated at 914,000 bushels.

Pears.—Prospect for pears on July 1st was 81 percent and is indicative of a total production of 546,000 bushels compared with 303,500 bushels last year.

CHEESE CONSUMING COUNTRIES

The nine principal cheese consuming countries are as follows:

	Pounds consumed per capita
Denmark	11.2
United Kingdom	11.2
France	8.1
Netherlands	8.0
Norway	7.1
Switzerland	5.3
Italy	4.8
Australia	4.8
United States	3.8

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YOU ARE SAYING TO YOURSELF—"If I only knew of something to stop that Backache—help my Rheumatism—cure my Neuralgia, I would send and get it at once."

Get It. Gombault's Caustic Balsam will give you immediate Relief. A Marvelous Human Flesh Healer and a never failing remedy for every known pain that can be relieved or cured by external applications. Thousands testify to the wonderful healing and curing powers of this great French Remedy. A Liniment that will soothe, heal and cure your every day pains, wounds and bruises.

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It Helps Nature to Heal and Cure. Penetrates, acts quickly, yet is perfectly harmless. Kills all Germs and prevents Blood Poison. Nothing so good known as an application for Sores, Wounds, Felons, Exterior Cancers, Burns, Carbuncles and Swellings.

"I had a bad hand with four running sores on it. The more I doctored the worse it got. I used Caustic Balsam and never needed a doctor after that." —Ed. Rosenburg, St. Ansgat, Ia.

Mrs. James McKenzie, Edina, Mo., says: "Just ten applications of Caustic Balsam relieved me of goitre. My husband also cured eczema with it, and we use it for corns, bunions, colds, sore throat and pain in the chest."

A Safe, Reliable Remedy for Sore Throat, Chest Cold, Backache, Neuralgia, Sprains, Rheumatism and Stiff Joints. Whenever and wherever a Liniment is needed Caustic Balsam has no Equal.

Dr. Higley, Whitewater, Wis., writes: "I have been using Caustic Balsam for ten years for different ailments. It has never failed me yet."

A liniment that not only heals and cures Human Flesh, but for years the accepted Standard veterinary remedy of the world.

Price, $1.75 per bottle at all Druggists or sent by us express prepaid. Write for Free Booklet and read what others say.

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Factory
Cut-Price

U. S. Officer's Shoes
Hand sewed, first grade factory, cut-down price. Direct to you at only $6.85 Made of the best Waterproof Mahogany calf leather. If these shoes are not just as we say, send them back. You do not lose a cent. Retail price of this shoe is $10.00. Built for work and dress at the same time. If you are sending money order or check do not include postage. Pay only for shoes. We pay postage.

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First grade factory, cut-down price. Direct to you at only $5.15. Retail price of these shoes is $8.00. Made of the best elkskin waterproof leather.

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COTTON SEED MEAL
OWL Brand DOVE Brand JAY Brand
F. W. Brode & Co.
Established 1875.
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MEMPHIS, TENN.
Our Brand on the Tag Means Quality in the Bag

Seed Wheat
Leap's Prolific
Recleaned, clear of all trash, $4.00 per bushel. New bags at cost. Order early, supply limited.
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JOSEPH H. BRINTON, West Chester, Pa.

112 Acres $3200, With Horses, Tools, Crops;
Big Pennsylvania money-making farm, near town; machine-worked fields, 15-cow spring-watered pasture, wood, 300 apple trees, 30 peach, also pears, plums, cherries; 2-story, 9-room house, pure water, wide piazza, magnificent view; splendid shade; basement barn, silo, spring water, other buildings; owner's plans force sale; includes pair horses, harness, mowing machine, plow, harrow, part growing crops; only $3200, easy terms. Details page 41 Strout's Big Illustrated Catalog Farm Bargains Pennsylvania, Delaware, Maryland, New Jersey, New York, many other states. Call or write for free copy. STROUT FARM AGENCY, 1422 D. E., Land Title Bldg., Phila., Pa.

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Good seed means satisfied customers. When you buy our seeds you have the best that grows. FREIGHT PAID. BAGS FREE. Headquarters for Timothy Seed, Montana Grown Alfalfa and Lancaster County Grown Seed Wheat. BUY DIRECT AND SAVE MONEY. Write today for samples and prices.
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We will extend your subscription the balance of this year and all of next, or to Jan. 1, 1922 for 75c. The balance of this year and 2 years for $1.25; the balance of this year and 5 years for $2.25.
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Car and labor shortage limit the amount we can ship. Order now and you can get **ROYSTER'S.** Delay—and you may not be able to get ANY fertilizer!

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The world's grand champion herd—Home of two grand champion boars, one grand champion sow. Write for illustrated catalog. It is free. Stock of all ages for sale.
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$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs.
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Made just for hogs only. It does quicker and better work than ordinary powders and costs less to use.

Mr. M. K. Huber, Jr., Lickdale, Pa., wrote Dec. 22, 1919. "I used Cal-Sino on three shoats at age of 3 months when they weighed 38 lbs., 58 lbs., and 62 lbs. The 38 lb. one had worms; **after two doses of Cal-Sino the worms passed.** These hogs were farrowed on March 16th and I slaughtered the 38 lb. one Dec. 2nd at 8½ months of age; it dressed 282 lbs. The other two dressed 276 lbs. and 291 lbs. on Dec. 16th. These hogs dressed 849 lbs. at a cost of $151.53 or slightly less than 18c. per pound while my neighbor's hogs cost 20c. and over per pound. It is impossible to recommend Cal-Sino too highly."

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FREE TRIAL OFFER.—Try it at our risk. If your dealer can't supply you send us his name and state on how many hogs you want to try Cal-Sino; we'll send you a 60c., $1.25 or $2.50 box on approval, you to pay only if satisfied.

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"Just Remember C-S—In the Round Yellow Box."

BIG BLACK BERKSHIRES
Write for prices or come and see the fine bred gilts and young sows ready for breeding in the Fall that we are offering at bargain prices. The bred gilts are part of our foundation herd. For reference—our satisfied customers.
CRESTMONT FARM, SUNBURY, PA.

FLUSHING SHEEP

By W. H. TOMHAVE

There are two times during the year when the farm flock of sheep requires special attention for successful sheep raising. This is at breeding time and when the lambs are dropped in the spring. During the breeding season it is highly important that the ewes be in good condition in order that they may be bred at as near the same time as possible. Ewes that are in good condition at breeding time usually produce stronger and more vigorous lambs than those that are in a poor or run-down condition.

If the ewes in the flock are all bred during a period of a few weeks it will mean that the lambing season is not prolonged and makes it possible to provide for the help necessary during the lambing season in the spring. "Flushing" the ewes during the fall before the breeding season is a common practice among sheep men. This means putting them in good condition. It not only means to improve the vigor of the lambs at the time of birth, but is also supposed to influence the number of offspring which the ewe will produce.

As the time for breeding approaches a number of the ewes that have raised lambs are in thin flesh. This condition should be overcome before the ewes are bred. The most practical method of "flushing" or conditioning ewes is to provide them with a more luxuriant pasture, or to allow them a grain ration on pasture for a period of ten days or two weeks before the breeding of the ewes is started. A fresh blue grass or mixed grass pasture, or a field of rape, furnishes an admirable and economical means of conditioning if pasture is used. If grain is used, it should be allowed at the rate of about one-fourth to one-half pound per ewe daily. Such grain mixture should be rich in protein and consist of such feeds as bran, oil-meal and oats. A mixture of equal parts of each of these feeds is a desirable combination.

The ram that is used for mating with the ewes should be given an extra allowance of feed shortly before the breeding season if he is not in good condition of flesh. It is just as important that the ram be in good breeding condition to insure a good lamb crop as it is to have the ewes in good condition. The ram should also be given plenty of exercise to keep him in good physical condition.

The time of the year to breed the ewes will depend upon the time of the year that the lambs should be dropped. Fairly early lambs are, as a rule, more desirable than late lambs. They can be finished for market before the hot weather of midsummer and the lambing season is out of the way before the rush of spring work comes on. The gestation period of sheep is about 148 days, so that if early March lambs are desired the ewes should be bred early in October.

WOOL PRICES

Wool is low. It was high last year. In both cases it has done the wrong thing in going to the extreme. Too high and too low are comparisons to be sure, but not very wise ones. One extreme is likely to follow another. Some one remarks that had wool remained where it was last year for a few years the dairy cow would have become so scarce as to be a curiosity. Now it is so low that no one wants sheep. In the West they agree to put the wool in warehouses and hold for better prices, the banks advancing a reasonable amount on the warehouse receipts. Recently we understand this plan was adopted in New York State. Just what warehouses are selected I have not learned but a wool grower can get all this through his county and State association. Farmers are coming now to do these little acts of good business in many lines and it is reasonable to expect that more of it will be done. There will be protests from speculators but if the farmers stick they have the game. I believe that farming is likely to be relatively a better business than of old. It may not be a business of large profits as are many other lines, but it plays pretty safe and farmers are coming to handle their own lines largely themselves. If they do not get a big price for products they may come nearer getting what the ultimate buyer pays. It will eliminate some middlemen and save considerable to the public.—H. H. Lyons, New York.

PROFITABLE TO HAVE HOGS HARVEST CORN IN FIELD

Hogging off corn is no longer in the experimental stage in the hog-raising sections of Pennsylvania. In twenty-four demonstrations last year the price received for a bushel of corn in the field was $1.88. This was the price returned by 100 to 125 shoats when turned into the cornfield and allowed to harvest the crop at their leisure, with all items of expense charged against the value of gain in pork. The shortage of labor, coupled with the rapid and profitable gain made by porkers in the cornfield will stimulate a very general practice of hogging off corn this fall. It is advisable to feed a quarter pound of digester tankage to each shoat daily in addition to the entire corn. Dwarf Essex rape can be advantageously sown at the last cultivation of corn. This will furnish green succulent feed thruout the period the shoats are in the field.

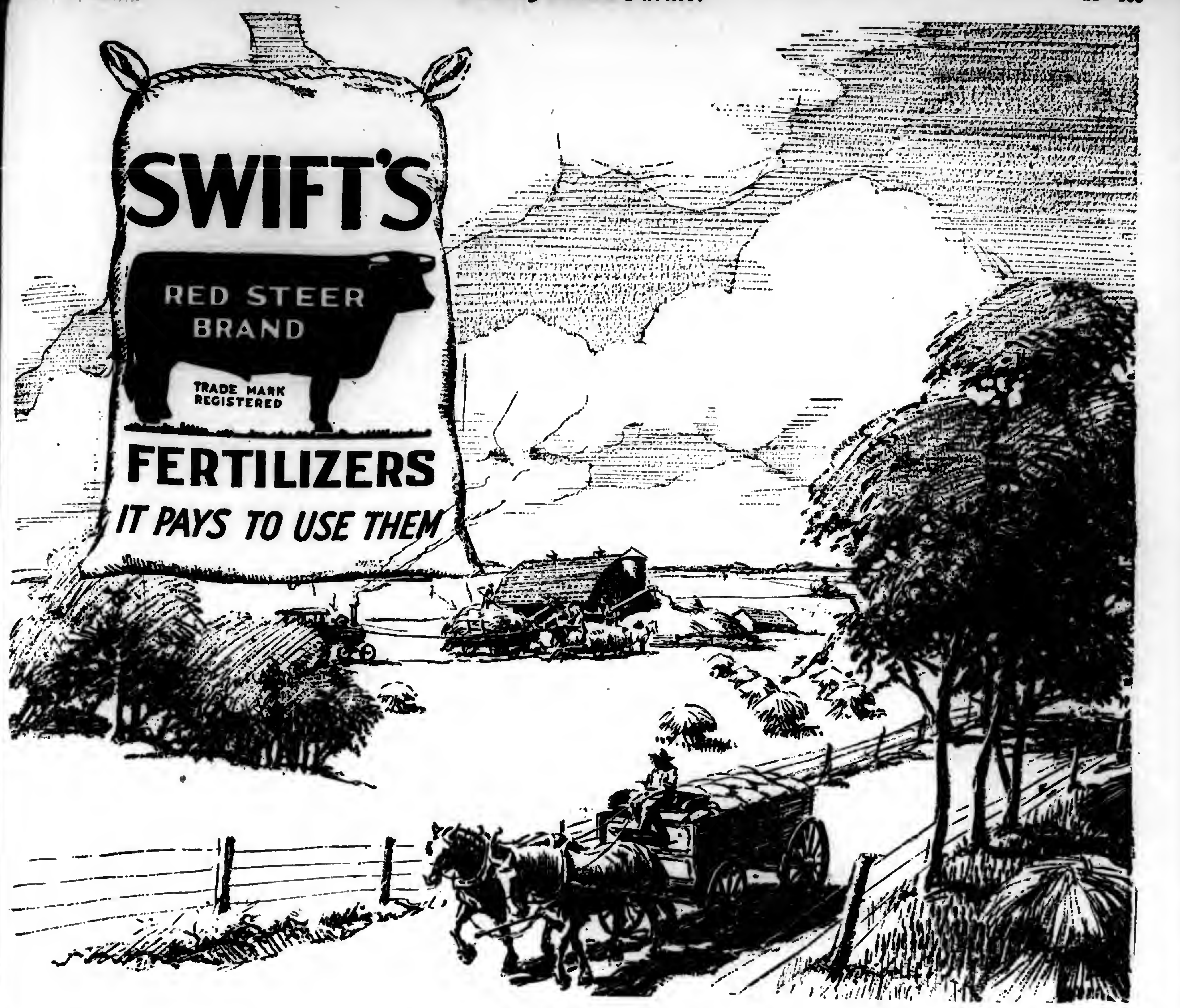
STOMACH WORM DANGEROUS PARASITE IN SHEEP

One of the greatest parasites of sheep is the stomach worm, prevalent at this time of year. They are about three-quarters of an inch in length, red and white intertwined, and become attached to the stomach where they live on the blood of the animal. The general health of the flock can be better maintained by preventing or curing invasion.

In culling the flock remove all unthrifty ewes, as they are the animals most likely to be infected. Keep the ewes in a thrifty condition by liberal feeding, which helps resist the worm.

A frequent change of pasture prevents infection, as the egg is laid and hatched externally, and if a host animal is not present the larvae die.

Breed for earlier lambs, as the young lambs then become large enough to resist the infection, being in a thrifty condition when warm weather comes.



More fertilizer per acre means more profit

THE expense of plowing, harrowing, seeding, and the interest on your investment is the same regardless of the yield per acre. It takes a certain number of bushels per acre to meet that expense, which is now heavier than ever before. Every extra bushel is profit.

The amount and kind of fertilizer used directly influences the number of extra bushels per acre. Small applications of fertilizer pay the farmer a good profit but heavy applications pay the farmer the biggest profit. Use 200 to 400 pounds per acre of Swift's Red Steer Fertilizers and increase the number of extra bushels.

Swift's Red Steer Fertilizers are the best crop producers because the materials used are the result of knowledge and experience of men trained in agriculture and chemistry.

Behind every bag on which the Red Steer appears is Swift & Company's 50-year-old reputation for making highest quality products.

Get the most plant food for your money by buying Swift's Red Steer Fertilizers containing 14% or more plant food.

Don't delay, place your order now with our local dealer, or write our nearest sales division.

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Fertilizer Works
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Use high analysis brands

We want you to get the most plant food for your money and we therefore recommend these brands

	Analysis		
	Ammonia	Phosphoric Acid	Potash
Swift's Champion Wheat and Corn Grower	2	12	2
Swift's High Grade Acid Phosphate Fertilizer	0	16	0
Swift's 10-4 Fertilizer	0	10	4
Swift's Clay Soil Special	2	12	0

AMMONIA	gives the plant a quick start, particularly necessary when seeding is delayed to combat the fly, increases vegetative growth, and aids in stooling.
PHOSPHORIC ACID	increases root growth, aids in stooling, plumps the berry and hastens maturity.
POTASH	stiffens the straw and aids in starch formation.

You can tell from previous crops what is needed to get the maximum yield.

Make your selection and remember you are buying plant food, not tons of fertilizer—and buy the high analysis brands. Other brands on application.

Swift & Company

"IT PAYS TO USE THEM"

Summer Feeding Pays

COWS on grass alone go down rapidly in milk flow and bodily vigor when the drought comes or when the grazing season is over. Spring-freshened cows, fed Sucrene Dairy Feed while on pasture, keep up their heavy milk flow through fall and winter. Fall-fresh cows are in better condition for calving.

"Sucrene Dairy Feed has made me more money than any feed I ever bought. It produces larger quantities of milk at low cost and keeps stock in the best of health, with practically no calving troubles."—Thos. Y. Hackett, Daretown, N. J.

Sucrene Dairy Feed backs up the stimulating effects of grass—is many times stronger than the finest pasture in milk making and body-maintaining nutrients. Butter made from cows, fed Sucrene while grazing is firm and crispy—not smeary like butter from cows on grass alone.

Composed of wheat bran, linseed meal, prime cottonseed meal, cocoanut meal, corn gluten feed, corn feed meal, ground and bolted grain screenings, clipped oat by-product, molasses, salt, calcium carbonate.

Guaranteed analysis: 16½% protein, 3½% fat, 48% carbohydrates, 10% fibre.

Try this feed. Order a ton from your dealer. If he cannot supply you write us. The coupon brings you full information on Sucrene Feeds.

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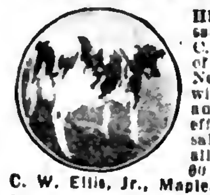

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High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.
C. W. Ellis, Jr., Maple Lawn Farms, Cortland, N. Y.

200 BLACK and WHITES and RED and WHITES 200

We buy and sell the very best cows obtainable and solicit trade from buyers who want the best. cows weighing from 1000 to 1200 lbs.; some are fresh, balance from 1 to 10 weeks away. If you want the best we want your business. And we can please you. We buy and sell continually and have 200 to select from.
F. L. PALMER & SON Moravia, N. Y.

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ACCREDITED HERD OF 80 GUERNSEYS
For Sale Grandsons of King of the May, 9001, and out of A. R. dams; one bull calf, price $150, and three ready for service, $250 and $300. An opportunity for the best kind of a foundation.
BELLE ALTO FARMS
M. H. McCALLUM, Mgr. WERNERSVILLE, PA.

BULL CALVES at BARGAIN PRICES
We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred, healthy bulls, from a clean, Tuberculin Tested Herd at reasonable prices. King of the May—Dolly Dimple—Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees.
WAWA DAIRY FARMS, 22 S. 32nd St., Phila., Pa.

Nine Reg. Guernsey Bulls, 1 to 10 mo. old. Sires, Langwater Foremost, Glen Gable Friendship, 3 sired by son of Glenwood's Buttercup, 769 lbs. fat at 3 years. H. B. SHENK, ELVERSON, PA.

Guernsey Bull Calf 6 weeks old. Sire, Brookmead's Bonny Lad 36268, out of Langwater stock. Dam Imp. Easter Daisy 12583, out of Governor of the Chene.
GEORGE K. BOBB, LANSDALE, PA.

Ayrshire Bull Calves From high record A. R. Dams
ROBERT TEMPLETON & SON, ULSTER, PA.

MILKING SHORTHORNS, sons of Glenside Royal Stamp, grandsons of General Clay; also a few females. C. M. KENNEDY & SONS, ULSTER, PA.

Reg. Holstein Bull Calves, from officially tested dams and a 30 lb. sire. Write for prices, pictures and pedigrees. Walter M. CRUTTENDEN, Forty Fort, Pa.

Reg. Holstein Bulls from calves to serviceable age. Good tuberculin tested under Federal and State supervision. BONNYMEADS Farms, Harrisburg, Pa. R. 1

CALF BORN JULY 6th. Guernsey bull, Dam A R 7 May Rose crosses, at $75. Locust Lawn Farm, Bird-in-Hand, Box P, Lanc. Co., Pa.

REG. SHORTHORNS FOR SALE. Cows with calves; heifers, bred and open; also some choice young bulls Farmers' prices. R. H. LYLE, CADIZ, OHIO.

MID-SUMMER SALE OF AYRSHIRES
A fine selection of heifer calves, bred heifers, and young cows in this offering. Excellent opportunity to found or build up your herd with animals from the best breeding backed by large records. Prices reasonable. Tuberculin tested, no reactors.
CRESTMONT FARM, SUNBURY, PA

TIOGA COUNTY PENNSYLVANIA----THE HOME OF HEALTHY HOLSTEINS
PUREBREDS AND GRADES
40 herds under State and Federal supervision and many more on the waiting list
TIOGA COUNTY HOLSTEIN BREEDERS' ASSOCIATION
An organization backed by 100 paid memberships for the purpose of assisting its members in producing
GOOD HEALTHY HOLSTEINS
We invite inspection. Address all inquiries to
PAUL P. KORB, Secretary, WELLSBORO, PA.
TIOGA COUNTY HOLSTEIN BREEDERS' ASSOCIATION

BRADFORD COUNTY PENN'A
SPECIAL OFFERS OF PURE BRED LIVESTOCK
JERSEYS.—Mixed car load of females and several young bulls. Registry of Merit and Cow Testing Association Records
HOLSTEINS.—Several Bulls, 6 to 10 months old. A. R. O. dams. Excellent Breeding.
SEVERAL YOUNG BULLS [illegible]
GUERNSEYS.—Herd dispersal, largely imported blood
AYRSHIRES.—Few young females
All of the above are pure bred cattle with proper registration papers. Address inquiries to
D. K. SLOAN, Secretary. Towanda, Penna.
BRADFORD COUNTY LIVESTOCK BREEDERS' ASSOCIATION.

SUGGESTIONS TO THE G. L. F. EXCHANGE

The G. L. F. Exchange when completed, with its million dollar capital on which it is to pay the stockholders 6 percent interest, must do a big business. In addition to paying interest and expenses it must sell pretty close in order to get the best terms for its patrons. This depends just as much as upon selling large quantities as it does in buying right. The business is to be equipped with a large capital so that it may get back close to the source and buy right. It can buy right only as it deals largely. Very much depends then on selling.

Now it is urged that with the Granges of the State, the local leagues and the aid of the farm bureaus it will be easy to sell feeds and fertilizers, seeds and supplies as fast as they can be bought. No trouble about making sales, they say. Most of the leagues are already incorporated and so ready to enter the buying of feeds.

It has occurred to me, having had a little experience in one way or another, that it is one thing to incorporate a local league and another thing to put it in shape to handle goods. Some of the locals will undoubtedly be ready in short order to do business and it may be that they are already. In many other cases there is no plan for buying, no place for unloading and but little thought given to the question of collecting when sales are made. It is true that men do bring in cars of fertilizers, and sometimes of feeds and notify the buyers from whom they have taken signed orders and deliver from the car. The feed dealers are going to object strenuously to this method of procedure. They have machinery to crush out a local operating in this way unless it is protected from outside. The dealer is holding a lot of men by accounts, notes and mortgages. It is holding a lot of cash customers by making special prices. The farmers' local is likely to have no road of roses.

One way is for the local to buy land, erect buildings for storage—perhaps for grinding; get in a switch, hire a trusty man and go into business. This takes money. We are using much money these days. We are in a $4,000,000 job in co-operative creameries, and more to come. We are raising a million for the G. L. F. Exchanges and now, if we are going to do what we plan, it is quite possible that we may have to finance certain locals.

It is by no means certain that the local feed dealer may not be able to undersell the co-operatives. Other experienced dealers have gone into towns and commenced the feed business where another dealer had been stationed longer and came out again with more experience and less money.

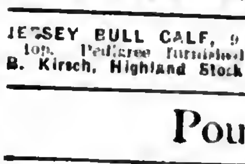
Binder twine went down the other day at some of the retail stores eight cents a pound because the Grange Exchange had established a price of sixteen cents a pound. Lowering prices is good, but it will not pay dividends on stock. The writer has been considered a little unorthodox and viewed with a bit of suspicion for raising this question. It may be unnecessary, but it is no harm to look at the problem before we get fully into the thick of the fray.

For a time, at least until we get into the way of doing our own business, it seems to me that the plan in vogue in several counties in Vermont may be worth giving some attention.
—H. H. Lyon.

YOU CAN'T CUT OUT A BOG SPAVIN OR THOROUGHPIN
but you can clean them off promptly with
ABSORBINE
TRADE MARK REG. U.S. PAT. OFF.
and you work the horse same time. Does not blister or remove the hair. $2.50 per bottle, delivered. Will tell you more if you write. Book 4 R free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Varicose Veins, Ruptured Muscles or Ligaments. Enlarged Glands, Wens, Cysts. Allays pain quickly. Price $1.25 a bottle at druggists or delivered. Made in the U. S. A. by
W. F. YOUNG, Inc., 154 Temple St., Springfield, Mass.

One Carload
22 Registered Holstein Females
Twelve Milk Cows, four with A. R. O. records; eight are bred to Dutchland Creamelle Denver Lad, 1627 0, who is of Creamelle Vale and Pontiac Korndyke breeding; five 2-year-old heifers, four of which are bred; one yearling heifer; four heifers, 5 and 6 months old. Thirteen youngest individuals are granddaughters of $50,000 bull, King Segis Pontiac Alcartra. Price $300 cash. Come and look them over. The lot will please you. Railroad station, Williamsport.
WEST BRANCH FARM, Linden, Pa.

POLLED HOLSTEINS
registered in the Herd Books of the Holstein Friesian Association of America. Herd sire out world's record senior four-year-old.
KEYSTONE BEAUTY PLUM JOHANNA
No. 161640
At 4-10-20, 365 days—25787.5 milk; (4.02%) 1294.7 butter
At 3-3-23, 365 days—22496.6 milk; (3.94%) 1108.9 butter
2 years under full age—48284.1 milk; 2403.6 butter. The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year.
Bull calves $100.00 and up. GEORGE E. STEVENSON & SONS, Clarks Summit, Pa.



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150 reg. cattle, 20 reg. bulls, 100 high grades, a carload of any age that you may want. Holstein heifer calves $20 each express paid in lots of 5. Over 2,000 satisfied customers will send list in your states for reference of square dealing at SPOT FARM.
J. C. Reagan, Tully, N. Y.

STEVENS' HOLSTEIN FARM
OF CORTLAND, N. Y.
King Korndyke Sadie Vale Jr., No. 20391, two nearest dams averaging 36 pounds of butter in 7 days, heads my herd. Butter records from 17 pounds two-year-olds to 38 pounds at full age. Also high grade Holstein calves, either sex, $20.00 each. Write your wants. PAUL H. STEVENS, Prop.

HOLSTEIN FRIESIAN HEIFER AND BULL CALVES
Purebred registered and high-grade. Price $20 up. Splendid individuals and breeding. Write us your requirements. BROWNCROFT FARMS, McGraw, N. Y.

SUNNYBROOK GUERNSEYS
46 head, free of tuberculosis, bull calves for sale
EDWIN S. MAULE. COATESVILLE, PA.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale.
MILLARD E. BASEHOAR, Littlestown, Pa.

JERSEY BULL CALF, 9 months old, bred at the top. Pedigree furnished on application. Anselm B. Kirsch, Highland Stock Farm, Nicktown, Pa.

Poultry

Look! BABY CHICKS $14 a 100 up!
By insured parcel post, postage paid. 40 breeds chicks, 4 breeds ducks. Get August and September chicks for February and March layers. Catalog free, stamps appreciated.
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Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Pin Worms—Foot Soreness.—Horse is troubled with pin worms and another horse is foot sore. Horse shoer says hoofs are hard. W. W., Tyrone, Pa.—Occasionally wash out rectum with one part coal-tar disinfectant and 50 parts tepid water, using a fountain syringe. Apply any one of the commercial hoof ointments that are regularly advertised in this paper.

Unthrifty Mare.—Mare is unthrifty and low in flesh. D. R. B., Bellefonte, Pa.—Her teeth may need floating. Mix equal parts powdered gentian, ginger, feougreek, salt and baking soda. Give her one teaspoonful at dose in feed three times a day.

Mange.—The fore shin of my horse is itchy and the skin is unhealthy, but the animal seems to be in perfect health. C. J., Camden, N. J.—Apply 1 part sulpher, ½ part carbonate of potash and fresh lard 6 parts to shin three times a week.

Hide-Bound.—Horses are hide-bound and not thriving. W. K., Silver Creek, N. Y.—Hide-bound horses usually lack grooming, proper shelter and proper feed. Groom twice daily, keep them warm, feed plenty of nourishing feed and give each one a dessert spoonful Fowler's solution at dose in feed three times a day.

Sore Teats.—Have cow with sore teats. J. T. M., Lebanon, O.—Apply 1 part oxide of zinc and 5 parts vaseline twice daily.

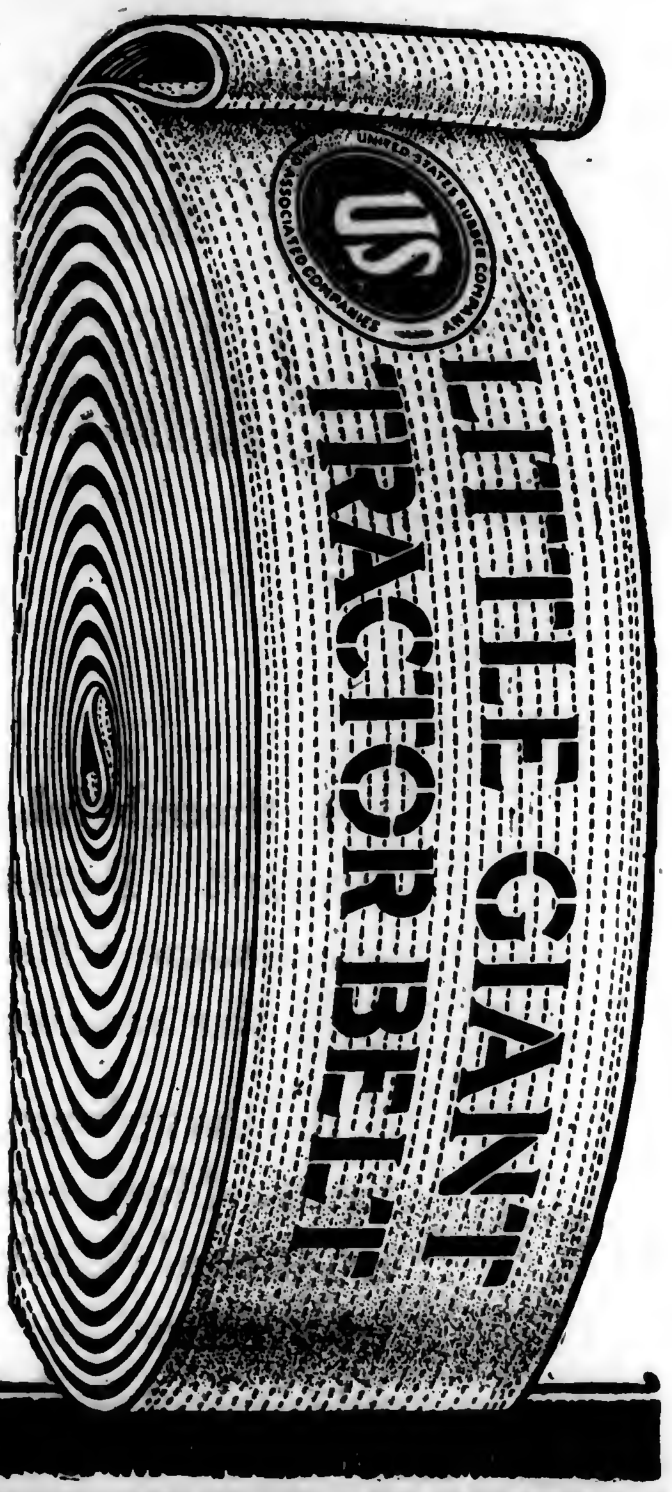
Wind Teat.—Have cow troubled with "wind teat." S. C. M., Belmont, N. Y.—Apply a bandage to teat adjusted so as to bring gentle pressure on dilated portion of teat canal.

Bitter Milk.—For thirty days cow has been giving bitter milk. She is due to freshen next May. J. G. W., Chester, Pa.—Change feed, ventilate stable, keep barn clean and disinfected. Give tablespoonful bicarbonate of soda and three tablespoonfuls powdered wood charcoal at dose in feed three times a day. Perhaps it is unprofitable to milk her; if so, dry her.

Unhealthy Skin.—Bare patches appear under eyes of cattle and are spreading. The hide in patches is rough and warty-like. C. R. C., Reading, Pa.—Apply 1 part iodine and 15 parts petrolatum daily or once every two days.

Partial Paralysis.—Cow due to freshen soon commenced to spit up feed last November; local veterinary treated her for paralysis of stomach; she seemingly got well. Now one eye and ear seem to be paralyzed, but she has good appetite. Altho well fed she remains thin. E. M. E., Proctor, W. Va.—Give 1 draw fluid extract of nux vomica at dose three times a day. Keep her warm and comfortable.

Actinomycosis.—Heifer had abscess in mouth which opened and is healing. She is troubled with scours. A. F. F., Newark, Del.—Give 40 grains of potassium iodide at dose three times a day and if you notice any more abscesses forming paint bunch with tincture of iodine occasionally.



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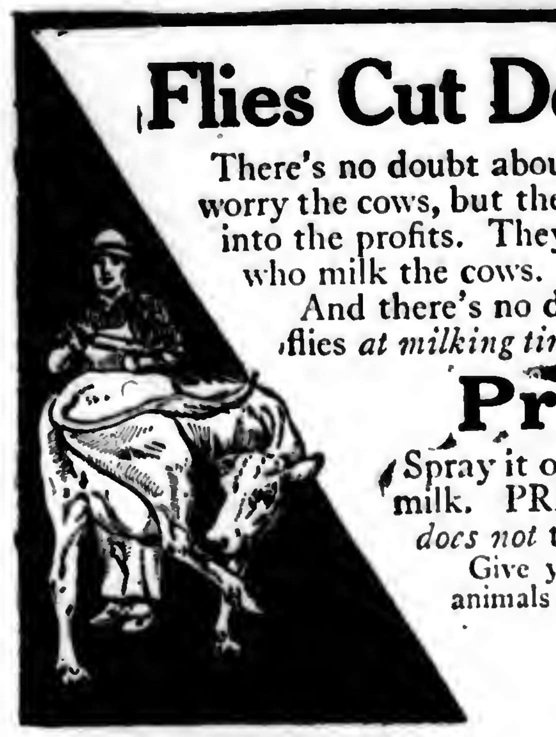

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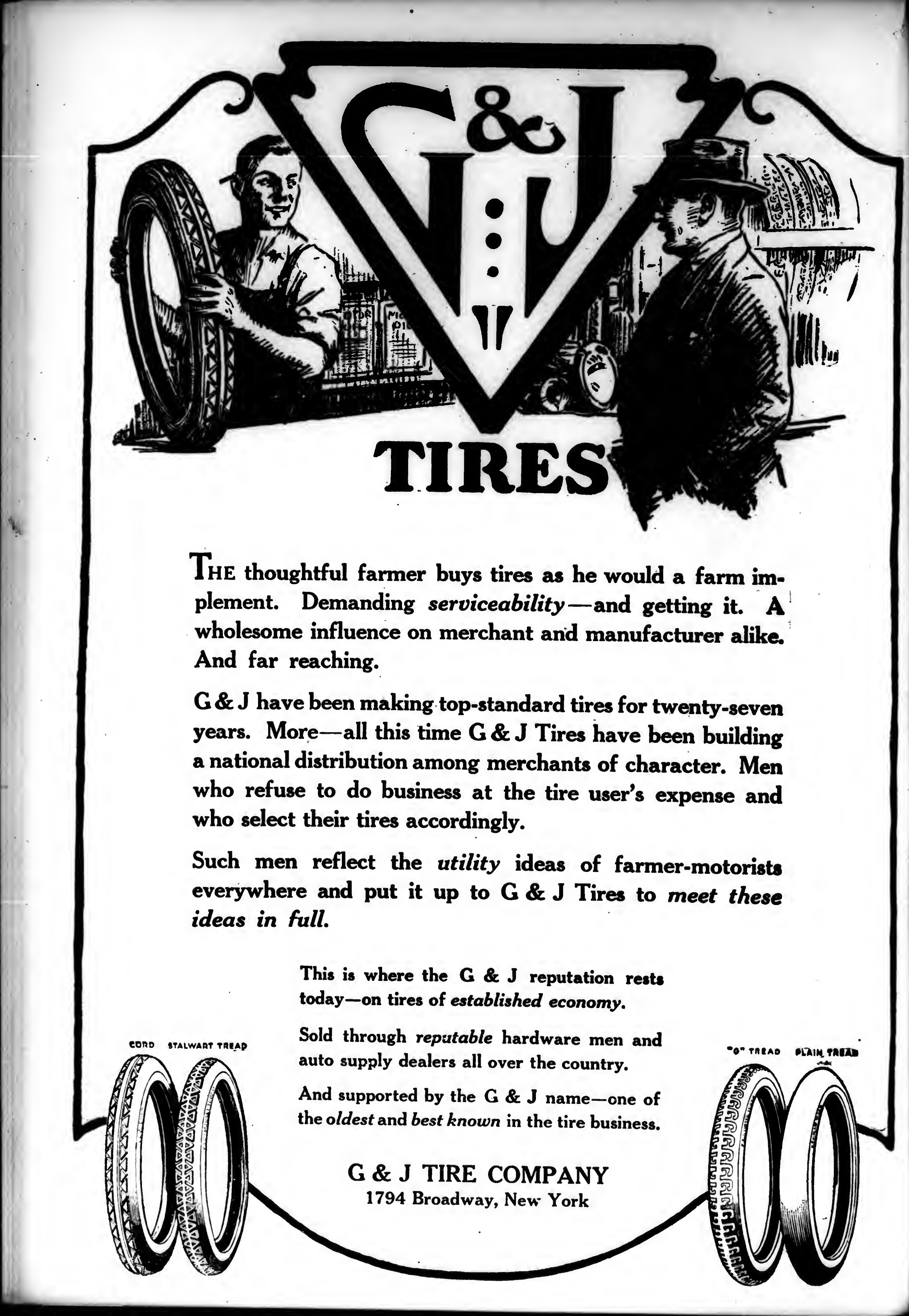

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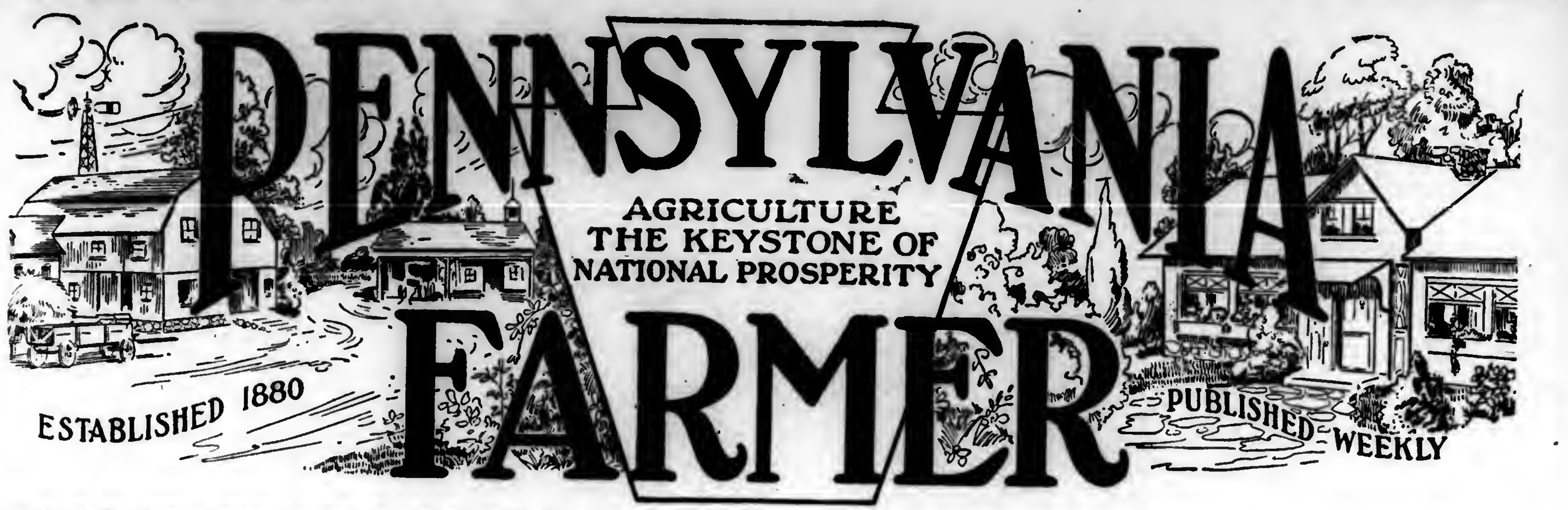
PENNSYLVANIA FARMER
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ESTABLISHED 1880
PUBLISHED WEEKLY

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Planting Next Year's Wheat Crop

A Plain, Practical Discussion of an Important Subject

By J. N. Glover, Union Co., Pa.

Oat stubbles furnish the largest acreage for wheat in this section of the state, though wheat stubbles silage ground and sod are often turned for wheat. In other sections, potato and tobacco fields are seeded to wheat, often without being plowed. Since wheat should have a firm, moist seed bed, oats stubbles should be plowed as soon after the crop is off as possible, and each day's plowing should be rolled or harrowed to conserve moisture.

Where wheat stubbles are turned for a second crop of wheat, they are usually plowed after harvest, and the manure in the barn yard, made since spring, is hauled and plowed down or spread on the plowed ground, and harrowed and rolled to hold moisture.

Owing to the draft in hauling the spreader over the plowed ground, many farmers turn the manure under with the wheat stubbles, as it is well known that a smaller application of manure on the plowed ground will make a better yield of wheat and also show in the grass to follow than the larger amount plowed under.

Sod for wheat is plowed just as soon as the hay is off and the sod is in condition for plowing. A sod field plowed for wheat is nearly always stubbled the following year. As good a yield is secured the second year as the first and a good stand of grass usually obtained.

Potato, silage and tobacco fields are not generally plowed for wheat, as the cultivations they have received usually make a good seed bed by disking and leveling with the smoothing harrow. By the time these crops are removed it is time to sow wheat and the aim is to get the seed into the soil at once.

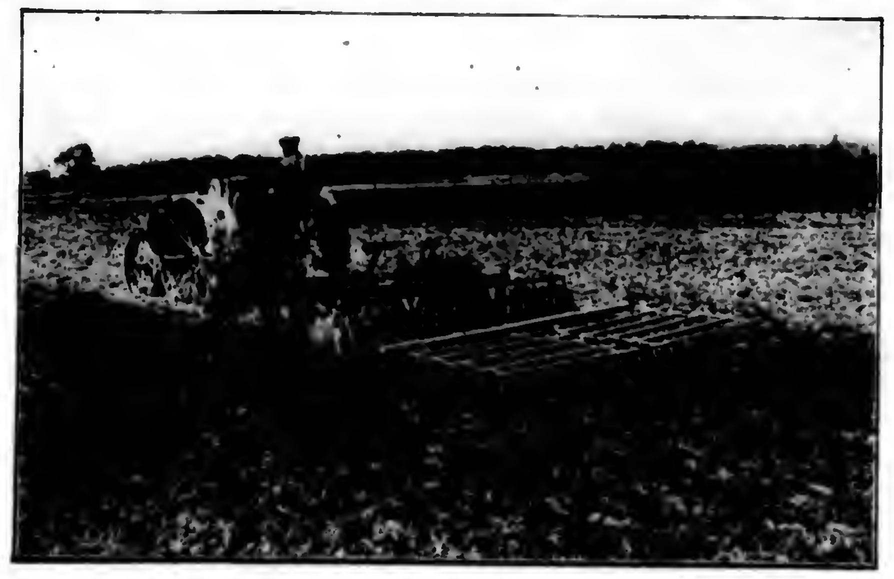
The sod which was plowed and the wheat and oats stubbles are harrowed as often as time will allow until seeding time which with us is from Sept. 1st to Oct. 5th for silage ground.

When lime is needed it is applied to either plowed wheat or oats stubbles. Its effects are more marked on the grass crops to follow than on the wheat. We think 50 bushels of stone or lump lime a good application every 10 or 12 years, though a small application put on with a lime spreader every rotation may be better, especially where one can get ground lime stone. The continued cultivation or harrowing and rolling which is done until seeding time has made a fine firm seed bed.

Most farmers drill from 150 to 250 pounds of acid rock per acre with the wheat and timothy seed in a drill made to saw all three. We find this to be one of the cheapest systems we can use to supply what our soil needs and to help make a stiff straw.

From 1½ to 2 bushels of good, cleaned wheat are sown to the acre, after a rain, about the 5th of September, or when we think damage of the Hessian fly is past. We sow 3 quarts of timothy seed per acre.

Time Spent in Thoroly Fining and Packing Soil for Wheat Pays Big Wages


A Tractor is Able to Handle a Number of Implements at One Time.

Seeding this early in the month is not always advisable on account of the fly, but to wait much longer there is danger of rains setting in which often delays seeding longer than one wishes, in order to get a good stand of wheat to live through the cold winds and freezes of the winter.

To sum up: plow stubbles as early as possible. Harrow frequently to consume moisture and pack with roller or some tool to make the fine, firm seed bed. Plant plump grains of wheat free from cockle, chess or rye and early enough to get a good stand on properly fertilized and drained soils adapted to wheat. By following this program one may expect a good crop if the weather conditions are favorable.

FORECAST OF SEED CROPS

The production of practically all small vegetable seed crops will be considerably less this year than in 1919 or 1918. The reductions range from 88 per cent for spinach to 12 per cent for lettuce. Increases are shown for garden pole beans, garden peas and onion sets.

A slightly larger production than last year of the early crop of alfalfa seed in the Southwest is indicated. Due to smaller acreage and lighter yield to the acre, a production of timothy seed of approximately 80 per cent of last year is forecast.

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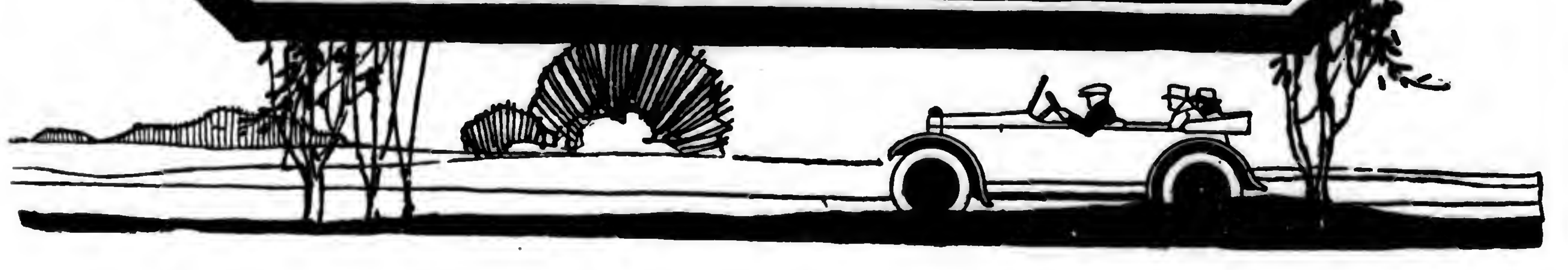

Apple Growing in the Appalachians

Comments Upon Conditions and Prospects in this Great Producing Region

By Elmer E. Reynolds

Special Correspondent

Apple growers of New York, Ohio, Michigan and other Northern States, will soon find their strongest competitor, not in the Pacific Northwest, but in the Southern Appalachian apple belt, extending down through the Cumberland Valley in Pennsylvania and Maryland and the Shenandoah valley in Virginia. The writer has reached this conclusion while accompanying the advisory board of the American plant pathologists on their summer conference tour devoted to a study of fruit diseases and methods of control. The visiting pathologists from nearly every state in the Union and several from foreign countries, started at Staunton, Va., on August 2nd, and worked their way northward into Pennsylvania, where a field conference was held on August 6th at Gettysburg.

Commercial orcharding is a comparatively new industry in the valley of Virginia. Most of the trees are less than twenty-five years old. Nevertheless there were 2,185,000 commercial apple trees in Virginia in 1918, of which sixty per cent were between the ages of one and twelve years. Orchard planting has been going on at a rapid rate since that date, and it is probable that there are upwards of 2,500,000 apple trees in the State. Many apple trees are also being planted in West Virginia and Maryland. These young apple orchards are being developed under the most thorough culture following scientific methods, and there is little doubt that a large percentage of the trees will live to maturity and produce large yields of fruit.

Augusta County, of which Staunton is the county-seat, is young in commercial apple production, but it is destined to be the largest apple producing county in the Shenandoah apple belt. In Augusta county there are 5,500 farms, and on every farm will be found an apple orchard which the owner is working to develop into a commercial proposition. There are now 1,200 orchards that produce or ship one or more carloads of apples each year. The largest commercial orchard in the county contains 22,000 trees planted on 750 acres. There are more orchard companies operating successfully in Augusta County than in any other county in the United States.

A characteristic of all this apple district is the spirit of practical co-operation and helpfulness among the growers. They cooperate for orchard improvement and in marketing their fruit. The proximity of red cedars to orchards is the cause of rust infections. It was found that removal of the cedars resulted in eliminating the rust. Last year the growers around Winchester lost upwards of a million dollars because of this disease, and the losses from this cause were heavy in all the Valley counties. After the apple harvest a cedar tree cutting campaign was organized, with a manager over each district. Thousands of cedars were cut down. The work was done so well that it is not easy to find a cedar tree near an orchard in the county, and there is little cedar rust to be found in the orchards. A similar campaign was waged in other apple producing counties, with equally favorable results.

The growers are receiving substantial aid from their State governments. At Inwood on the Cumberland Valley Railroad in Berkley county, West Virginia, the extension division of the state college of agriculture has erected a large apple packing plant to be used as a demonstration packing plant. While this plant will be utilized as a commercial packing house, fruit being supplied and packed for the nearby growers, there will also be conducted a series of extension schools in picking, packing and marketing apples and other fruits, together with the general problems of operating a packing house. Students will go through all the actual operations until they have acquired sufficient skill and speed to satisfy the requirements. This plant has a capacity of 1,000 barrels a day, and will be used for the first time this fall. It was erected at a cost of $34,000.

The larger growers have their own packing and storage plants, and "camps" for their employees. In the John W. Stewart 225-acre orchard near Martinsburg, W. Va., is a "camp" with accommodations for 115 men. It is equipped with large airy sleeping quarters, dining room, sanitary plumbing, shower baths and electric lights, giving the men as good living conditions as they could find in the cities.

Apple orchards and orchard lands are bringing big prices in the Valley fruit district. The Cohill 750-acre orchard near Hancock, Md., was sold some time ago for $300,000. This orchard, the first planting in which was done in 1903, extends four miles along the mountain side. In 1918 more than 45,000 barrels of fruit were shipped from this orchard. Last year the yield was 40,000 barrels, and this year the owners estimate a 65,000-barrel crop. A man who owns a 240-acre farm near Saunton, with 140 acres of young fruit trees, told me he had been offered $70,000 for the place, and it is not in the best of condition.

A Manure Shed That Saves Many Dollars Worth of Plant Food

One of the big orchards on "Apple Pie Ridge" in Berkley county, West Virginia, is owned by D. Gold Miller. Mr. Miller started his orchard planting some twenty-five years ago. Then the farm would not bring more than $15,000 and he was compelled to borrow money to pay expenses. By the advice of an expert from Washington he increased his borrowings to get money to plant an orchard. Today the place would readily bring $200,000. The annual production is from 8000 to 10,000 barrels of apples, with an 8,000-barrel crop now on the trees. Large quantities of early fruit have already gone to market. On this place is an apple storage of large capacity, and nearly on the highest point on the place, Mr. Miller has erected a lookout tower, from which he is able to see what is going on in all parts of his orchard and farm. A farm of seventy-five acres adjoining Mr. Miller's place was sold last year for $75,000, and this is away up on a West Virginia ridge several miles from a town.

Apple crop estimates and percentages are somewhat uncertain. My observations, however, lead me to believe that throughout the district from the Cumberland valley south to Staunton there will be a large crop of choice, well developed fruit. Frederick county, Va., which includes the Winchester district, will have better than 60 per cent of a normal yield, and is counting on a 500,000-barrel crop. Berkley county, W. Va., has a big apple crop. The yield is estimated at a half million barrels, which is 15 percent above last year's crop. Many summer apples are grown in Berkley county. They began selling at $2.75 to $3 but later dropped to 60 cents a bushel. The orchards of Maryland will produce 226,000 barrels this fall, according to estimates of S. B. Shaw, secretary of the State Horticultural Society. This is ten per cent better than the ten-year average, and much above last year's crop, the prospects being for 171,000 more barrels of apples and 87,000 more bushels of peaches this fall than last year.

Being near the source of supply of raw materials the barrel problem is not so serious a matter as in Northern fruit sections. Many of the growers secured their barrel stock several months ago. One dollar is the prevailing price in Augusta county. In Berkley county barrels are contracted at $1.25 and are now costing $1.30.

Much of the success of the fruit growers in the Southern apple-belt is due to the work of the plant pathologists in searching out the various disease infections and means of control. The growers have to contend with a few very serious diseases that are not prevalent in the Northern orchards. Cedar rust is one, and in finding means of controlling this one pest, the pathologists have benefitted the growers to the extent of millions of dollars.

According to Dr. F. D. Fromme, of the Virginia station, root rot is one of the most serious problems in Virginia orchards, and there is no preventive remedy for it.

In Berkley county, W. Va., the pathologists visited the first orchard in the East where collar blight was identified. Many thousands of trees have been lost in the district by this disease. Grimes Golden is especially susceptible to infection. Dr. M. B. Waite, of the Bureau of Plant Industry, suggests a new method of controlling this disease. He suggests cutting two-inch strips of bark up near the limbs and extending below where the infection occurs. He would then bridge-graft the strip with scions of an immune variety, Northwestern Greening, Paragon or Black Twig. He advises using wax, and disinfecting with coal tar creosote two or three weeks before the grafting is done. Leave enough strips so as not to endanger the life of the tree, and the next year cut out these remaining strips of bark, and graft as before.

In the D. Gold Miller orchard a striking demonstration of the benefits from spraying for apple blotch was observed.

Peach yellows was found to be quite prevalent in West Virginia and Western Maryland. Many trees are dying from this disease. Dr. Waite says he is able to keep down the yellows in his own orchard with a loss of about one per cent of the trees a year, by inspecting the orchard several times a year and removing every tree which shows signs of yellows infection. Prof. Scott has a large orchard in Western Maryland and has been equally successful in controlling yellows by this method.

Dusting versus spraying was the source of much discussion with considerable difference of opinion among the specialists as well as the farmers on this trip. In dusting and spraying experiments of the Virginia Experiment station in an orchard near Harrisonburg, dusting seemed to be slightly more effective than spraying. In the Optimus orchards at Bunker Hill, W. Va., the demonstration was decidedly favorable to spraying.

In conversation with the growers I found the sentiment strongly in favor of spraying apple orchards, while some favored dusting for peach orchards. Isaac Long, a large orchardist of Washington county, Md., said he could see no difference in effectiveness, but the spray stayed on the trees better than the dust and was cheaper.

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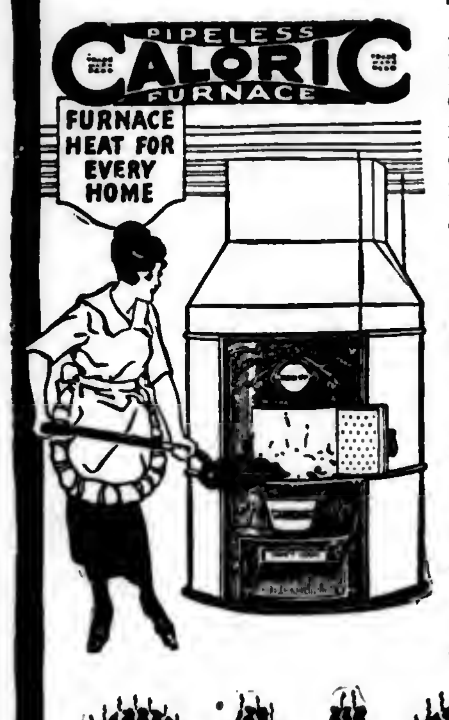
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Uncle Sam's Hired Men

Things the Bureau of Entomology is doing for Farmers

When Dr. L. O. Howard came to the Department of Agriculture 42 years ago, economic entomology was not sure of its position among the sciences. Men were inclined to feel that entomologists partook of the diminutive nature of the creatures they study. That is not true now and has not been true for a good many years. Dr. Howard says, modestly, that he has "probably helped the appreciation of economic entomology as a scientifically based thing among other scientific men."

Other scientific men say that Dr. Howard, by his work in the Department of Agriculture, has been the dominating force in making economic entomology a great recognized science.

I suspect, however, that the value of the science is not yet thoroughly understood by people generally. Let me point out a few things that have been accomplished by one of Dr. Howard's specialties—the study of the parasites of insect pests.

Dr. L. O. Howard, Chief of the Bureau of Entomology

Nearly 50 years ago, an instructor at Harvard had a fad for moths. Entomology was not his work, but he was playing at it. He had imported a number of moths and caterpillars from Europe. A storm destroyed his netting enclosure and liberated some of the caterpillars. Twenty years later, the gypsy moth progeny of some of those escaped caterpillars having increased unnoticed till that time, appeared as a pest and threatened the destruction of orchard, shade, ornamental and forest trees. The plague spread to Maine, New Hampshire, Rhode Island and Connecticut. The states and the Federal Government began a campaign of control. Dr. Howard made several trips to Europe and sent back parasites and natural enemies of both the gypsy and brown-tail moths. These insects are no longer serious enemies of orchard, shade or ornamental trees. Imported enemies and other control measures have got them in hand. Even in mixed forests, a system of forest management has been devised which, with the help of the natural enemies, results in practical control wherever adopted.

A few years ago the Japanese beetle got into New Jersey on imported nursery stock and threatened tremendous damage. The Department of Agriculture, in co-operation with the State authorities, have held it to a comparatively small area, and a representative of the Bureau of Entomology is now in Japan finding out the natural enemies of the beetle and sending them to prey upon it in New Jersey.

These are just a few of the things that the Bureau of Entomology under Dr. Howards' direction, has done. There are a great many others, some of them of even greater economic importance. But the story cannot be told in full. Nearly half a century of work cannot be shaken down into a sketch of a few words.

CO-OPERATIVE POTATO SPRAYING IN PENNA.

Co-operative potato spraying was conducted last year in six Pennsylvania counties. This summer similar operations will be undertaken in no less than fifty-two counties and on 3,000 farms.

This enormous increase in the number of farmers desiring co-operative potato spraying is considered phenomenal. Last year the average gain in yield to the acre from this spray was 37.6 bushels. The greatest gain was 61.5 bushels to the acre as a cost of only $8.45; the lowest was 11.8 bushels at a cost of $8.03. Sprayed potatoes averaged 191.7 bushels to the acre while unsprayed ones in the same fields averaged 154.1 bushels.

These facts show conclusively that the co-operative plan is an excellent one. From ten to twenty farmers make up an association and they engage a man to do the spraying, and buy the materials. A horse-drawn sprayer is used, and in most cases the man engaged to do the spraying is paid on a percentage of profits turned into the farmer's pocket. Many farmers bought sprayers following last year's demonstrations. They want to insure expensive crops against disease and insect injury, and will find themselves better off at the end of the year.

You can route the rats and parasites,
Put lights in every pen,
But you'll never swell the bank account
Till you've culled the slacker hen.

* * *

More than one-half of the plant-food contained in manure is wasted by careless and inefficient handling. Perhaps you can afford to lose that half; the chances are, you can't.

SUDAN GRASS

Ten years after its introduction to the United States from Khartum, Africa, Sudan grass was being successfully grown in nearly all parts of the United States. It does not serve well either as a "money crop" or a soil improver, hence it may never find a permanent place in regular crop rotations. It has, nevertheless, a very important place in the farmer's second line of defense as a catch crop which can be planted to give satisfactory returns when conditions have brought failure to other hay crops.

Sudan grass is replacing millet as the premier catch crop in many localities because of its ability to produce a fair yield and a high quality of hay under conditions of low rainfall; its rather short growing season, and its ability to thrive on a wide range of soil types. Large yields of Sudan grass are obtained only on good soils, but the grass fails completely only on cold, poorly drained land.

There are certain parts of the United States where the Department of Agriculture considers it unwise to depend on Sudan grass for hay. This is true of the strip of territory 200 miles wide along the northern boundary; the regions of high altitudes in the Western States, and also most of Florida and a narrow strip of land along the Gulf Coast.

Altho Sudan grass is best adapted by nature to use as a hay crop, it is also used with great success as a soiling and pasture crop for summer pastures. Its use as a silage material is limited by the fact that it is easily made into hay and fed as such with very little waste, and also because corn and sorghum both outyield it and are generally available throughout the region where Sudan grass is grown.

The feeding value of Sudan grass is equal to timothy hay. In localities where soy beans or cowpeas do well, these legumes may be grown in mixtures with the Sudan grass. Such a mixture produces a hay of higher feeding value than the grass alone, because of the high protein content of the legumes.

Sudan grass hybridizes freely with the sorghums. It is necessary, therefore, if pure seed is produced, to have the Sudan grass field at some distance from any sorghums, otherwise it will result in a mongrel crop the following year.

SEED SELECTION AIDS IN POTATO CULTURE

Farmers will profit by selecting seed potatoes in the field as is done for seed corn. By field selection it is possible to eradicate many of the diseases which are of annual occurrence in potato fields.

The tops furnish an indication for the entire plant, the department states. A well-developed, clean, thrifty and not too rank top gives indication of good yield and freedom from disease; potatoes should be selected for seed while the tops are still green.

Small potatoes from good hills are just as good for planting as the larger ones, so that the entire contents of any selected hills may be saved.

Selecting certain hills from the patch is much simpler than growing a seed patch alone, it is shown, and gives chance for improvement year by year through selection.

The Oliver No. 7 Plow
An Oliver Plow for every farming need also has been designed for the Fordson.
Roderick Lean Automatic Disc Harrow
Built in seven foot size. Other sizes are also made for special conditions. Complete line of specialized tractor spike tooth, spring tooth and orchard harrows.
Amsco Tractor Drill
Accurately sows wheat, oats, rye, barley, rice, peas, beans, etc. Furnished in plain grain or combined grain and fertilizer styles, and with wood or steel wheels.

How 100,000 Farmers Plow
The Fordson Tractor - The Oliver Plow

A well plowed field is the first requirement for a perfect seedbed. It is absolutely essential for a maximum harvest.

Throughout the world progressive farmers are doing their plowing in the newer, better way. With reliable Fordson power they are using specially built Oliver Plows to turn a uniformly good furrow.

Special Oliver Plows, in types to meet any soil conditions, are designed and built to work with the Fordson. That is why the work measures up so fully to what a good plowing job should be. Oliver Plows will do for you what they have done for 100,000 Fordson farmers in America—make your plowing easier and better.

To fully prepare your seedbed you also will want to use the Roderick Lean Automatic Disc Harrow which was designed especially for the Fordson. With the ground prepared, the Amsco Drill and the Fordson Tractor make certain proper seeding. All of these implements are automatic in action, being controlled by the operator from the tractor seat.

Farming the Fordson way with special Fordson tools is the sure road to complete satisfaction. See the Fordson Dealer in your town.

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Grown in the fertile Lancaster Wheat Belt—known in every section for its hardiness—vitality—productiveness. Is reliable—means increased yields wherever taken to be sown.

Eleven Varieties—smooth and bearded sorts—graded—sound—cleaned clean—*free of rye, garlic, smut, cheat, cockle.*

Shown here is the head of *"Leap's Prolific" variety*—yielded 35 to 46 bushels per acre.

Seed must please you—or may be returned and all money refunded. Prices are just. One bushel more wheat per acre will well repay you. Many customers report 10-bushel increase per acre.

"Hoffman's Wheat Book" *and samples free.* Write for them today. Mention this paper. *Hoffman's Seed Wheat will* please you and pay you!

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Handles All Kinds of Lime Rock and Fertilizer
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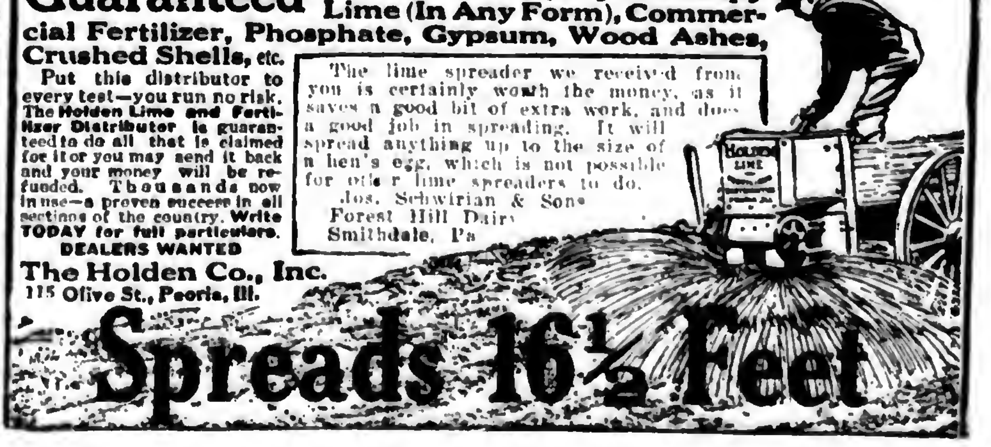
Jos. Schwirian & Sons
Forest Hill Dairy
Smithdale, Pa



PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880

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PHILADELPHIA, PA., AUGUST 21, 1920.
VOLUME 48 NUMBER 8

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

On Our Feet Again

ON THURSDAY afternoon, of July 29, a disastrous fire broke out in a six-story building located only two feet to the rear of the Pennsylvania Farmer building. The fire spread rapidly and proved to be one of the most destructive of the year, destroying wholly or partially seven buildings immediately east and north of our building. Fortunately for us, the firemen were able to keep the flames from the home of Pennsylvania Farmer, but the falling of a wall of the tall building in the rear demolished about 40 feet of our press room and crushed one-half of our big Hoe press, besides doing a great deal of damage to other machinery and equipment.

As will be seen by examining the picture at the bottom of the opposite page, the big press is really two presses built together, and since the front (the part to the right in the cut) was not seriously damaged it was possible to repair it so that we could print the issue of August 14th upon it. Upon this part of the press alone we can print a 16-, 24-, or 32-page paper and we will be limited to these sizes until the rear press can be rebuilt, which we hope to have completed in about two and one-half months. We have a justifiable pride in the fact that we were ready to run again in just fourteen days after the fire. If our readers could have seen the wreckage composed of piles of brick, crushed walls, broken machinery, shattered timbers and wet paper, all of which is but partially represented by the small picture on the opposite page, we are sure they would agree that we may rightfully feel jubilant over so rapid a recovery.

The issue of August 7 was printed in Cleveland and was necessarily somewhat late in reaching its readers. We had repair work so far advanced that we commenced printing the issue of the 14th only two days behind the schedule, and while it was also a little late in mailing, we hope to get the paper out on time from this time on. We thank our readers for their forbearance during these trying weeks.

Examine Your Liberty Bonds

THE Federal Reserve Bank of this district calls attention to the fact that about six million temporary, 4 per cent and 4½ per cent, coupon Liberty bonds have not yet been exchanged for permanent bonds by their holders. The permanent bonds are now ready for delivery and the exchange should be made at once. There is no way by which interest can be collected on the temporary bonds after the coupons have been detached and for this reason the new bonds are being exchanged for the old. We believe it would be well for all holders of bonds who are not sure of the kind they have, to take them to their bankers and see if they need attention. It is altogether probable that many people are not well informed as to the kind or kinds of Liberty bonds they hold.

Breeders' Associations

NO LINE of farmer organization is more simple to accomplish in comparison with the benefits obtained than that of breeders' organizations. One of the easiest and most certain methods of decreasing the unit cost of production is to obtain or develop producing units that have in them inherently high-producing qualities. The certainty of improvement thru right breeding is so well-established that it is a cause of wonder that so many are still content to plug along with poor stock and low yielding seeds.

Improvement in livestock has been slow but steady. Constructive breeding has been the work of individuals and it has been done for the purpose of selling stock to others. In this way the results of good breeding have filtered out into the business herds and thus gradually the average production has been raised. It is quite likely that, so far as dairy animals are concerned, the finer work of breeding breeders should be left to individual enterprise, as this work requires a thoro knowledge of the laws of heredity and of the history of the breed. Any work of development that depends upon the attainment of a definite ideal is better done by an individual. Such work is slow and expensive and well-bred stock is necessarily costly. For this reason the majority of dairymen have felt that they could not individually afford to buy well-bred stock.

But the opportunities afforded by bull associations removes this objection. It should be the easiest kind of co-operation for a number of neighboring farmers to get together and agree to purchase a bull of high breeding for joint use. This work started 12 years ago in Michigan but has developed surprisingly low. Up to July, 1919, twenty-seven states had a total of 78 bull associations, ten of them being in Pennsylvania. Figures for 1920 are not yet available but without doubt, the number has been greatly increased.

The promotion of these associations is good work for granges, farm bureaus, etc. The work of developing organizations for a specific purpose is greatly needed, for it is in this way that concrete results in any line will be accomplished. Let us quit hoping for a single, all-inclusive organization of farmers that will take care of all business needs.

Scared but not Hurt

THE DREAMS or nightmares of impending famine which many people seemed to enjoy six months ago are turning out to have been a false alarm. The yields from orchard and field are beyond all expectations and it is evident that the "lean kine" years have not yet begun. The public is jubilant over the situation and the ephemeral interest in promoting agriculture which it professed last spring is disappearing. But that is just like the public—all interest and excitement one minute, like a child with a new toy, and the next minute it forgets and the interest is transferred to something else.

As a matter of fact the fundamental needs of agriculture are just what they were before. The bountiful harvests of this year are due to a very favorable growing season, and the heroic, self-sacrificing labor of the women and children of the farm—labor which the present prices of many products show will be unrequitted. Farming is not not subject to spasmodic and violent changes. The character of the business does not permit it and the people engaged in it are able to adapt themselves to widely varying circumstances. Instead of drawing conclusions from the results of a single season the public should note the trend of affairs, and in this instance the trend has been from the farm to the city during the past forty years until the farming population has reached an irreducible minimum so far as the consumer's safety is concerned. The laboring and industrial worlds pride themselves upon their progress in the elimination of child labor, the protection of woman workers and the establishment of a "fair wage" for all labor—all except farm labor. Farmers have little sympathy with a class which exacts a competence for itself while at the same time it is willing to eat bread produced by the underpaid labor of another class, including its women and children.

The Campaign Slow

THE POLITICAL campaign has not yet progressed far enough to be even interesting. Both sides seem to content themselves with putting out "feelers" to find out what the sentiment of the country is on important questions, and both are vigorous in their espousal of what are known to be popular sides of questions. On questions about which there is a wide difference of opinion, politicians and candidates are reticent. But the time is fast approaching when they will have to quit pussyfooting, take off their coats and take sides in the battle with the spirit of Big League players. In spite of the present lull the coming battle promises to be fierce one. This period of preparation is no doubt being used in the preparation of smoke screens, submarines and hot air dirigibles for use during the next eight or ten weeks.

Our Washington Letter

Following the railroad wage increase, 80,000 navy yard workers in forty-three navy yards operated by the government are asking for an increase in wages. Their representatives have appeared before the Navy Wage Board with the demand for an immediate boost in wages of approximately 40 per cent. It is reported by the officials of the Emergency Fleet Corporation that the ship yard employes are able to earn more money at the present wage scale than they did during the war, even when large bonuses were paid, owing to acquired skill, greater efficiency and steady employment. The present rate of $6.40 a day prevails in government ship yards; but men on piece work are able to make big wages. Riveters and steelplate workers were making as high as $750 to $800 a month under the spur of war necessity, and it is said by the officials that some men are now making more than this. The assistant secretary of the navy told the men that as the navy wage appropriation is fixed by law, it would be necessary to drop employes in direct proportion to the amount of increase granted. The men agreed to this plan, and it is probable that this will result in a curtailment of naval activities.

* * *

Chairman Benson of the United States Shipping Board, is quoted as saying that "persistent rumors have been abroad recently that the United States intended to cut rates on the Pacific, but it is not the intention of the Board to cut rates arbitrarily as long as competition rests on a fair and equitable basis." Chairman Benson intimated, however, that should the Board find itself contending with any unfair methods it held the power to protect American shipping interests.

* * *

Representatives from the American Farm Bureau Federation Washington office recently called at the Shipping Board office to interview Chairman Benson in regard to statements made by a Shipping Board offical concerning a proposition to run lines of refrigerator ships to bring meat into the United States from South America and Australia. They were referred to Mr. Murphy, secretary of the Shipping Board. After a spirited discussion in which Mr. Murphy was given to understand such a move would mean serious loss to the American live stock and industry. The secretary gave out the statement that the Shipping Board does not now have such a service and does not at present contemplate such a plan. He qualified this statement by saying that the Board equipped a certain percentage of the ships with refrigeration as the trade requires. Under present conditions he said it was more profitable to transport meat from South America and Australia to England than to the United States. The Shipping Board secretary was also informed that such a scheme would be very unpopular with American Farmers.

* * *

The Dairy Division of the United States Department of Agriculture has issued a chart showing the balance of trade in dairy products in terms of milk from 1914 up to June 30, 1920. This chart shows that in butter an import balance in 1914 was wiped out early in the war, and in 1919 there was an export balance equivalent to over 600,000,000 pounds of milk. There was a large cheese import balance in 1914, which was wiped out during the war and the export balance grew to equal 500,000,000 pounds of milk in 1919. Condensed milk shows no exports up to 1916. Then a tremendous boost in exports took place, almost double that of butter and cheese. There has been a recession in exports since 1919, amounting to 400,000,000 pounds in condensed milk alone. The total shows an import balance of butter, cheese and condensed milk the equivalent of 700,000,000 pounds milk in 1914. The exports grew constantly until 1919 when they reached a balance of over 2,600,000,000 pounds of milk, a large part of which was in condensed milk. Since 1919 there has been a falling off in exports of cheese, butter and condensed milk equal to 800,000,000 pounds of milk.

Sea Scout: Well, what do you think about the ocean?

Land Scout: It's too deep for me.—Boys' Life.

NEW JERSEY NEWS

Middlemen Scored.—On the eve of harvesting in New Jersey of probably the largest peach and potato crop ever raised in the state the farmers have been assured of ample railroad transportation to take care of the shipment of the produce to the big markets in and around Philadelphia and New York. The distribution system from the terminals to the smaller cities is not so satisfactory, however, and dealers located there are being urged wherever possible to bring into use motor trucks to supplement, when necessary, the railroad facilities. It is said that considerable difficulty is being experienced in obtaining shipments in less than carload lots from the Philadelphia, New York and Newark terminals to the small town dealers. The situation is not such, however, that failure of railroad transportation can be exaggerated into an excuse for boosting city prices of farm produce to the present rate. Profiteering middlemen are still being blamed by market officials for excessive prices charged in cities for farm produce, which is so cheap on the South Jersey farms that many produce raisers are not gathering it. It is said that in scattering sections, farmers have plowed under pea and bean vines rather than continue picking and shipping at the prices they could get in the wholesale markets.

Produce in Markets.—Jersey products are now dominant in the markets of the state, and prices are fairly reasonable in view of the unusually high prices of a short time ago. Dealers are now offering fine qualities of fruits and vegetables, which are continuously arriving from the farms throughout the state. Lima beans are in stock at a rather exhorbitant figure, while green corn is high in price for this time of the year. Tomatoes, eggplant, cabbage, squash, cucumbers, lettuce, onions and other green foods continue good. New potatoes are fairly priced. Oranges, grapefruit and lemons are of good quality, but bananas are somewhat inferior. Jersey green cooking and eating apples are now on the market at reasonable prices, although they will be of a much better quality as the season advances.—Kelly.

HARRISBURG LETTER

Survey Work Valuable.—Valuable results are being obtained from the State's surveys of the apple and potato industries in Pennsylvania according to state officials. The tobacco survey established the importance of the industry in Lancaster county to the State at large and brought out that growing was under way in other counties on a profitable scale. The corps at work on surveys of the apple growing industry have jumped from the lower anthracite field to Berks county and will move this week to Pittsburgh after a few investigations. The western counties will be covered from Pittsburgh and it is expected to bring out many interesting facts. The corps at work in York county will be moved to the Bedford region.

More Potato Wart.—The potato wart has been discovered in parts of Huntingdon county by the State and Federal survey corps the last fortnight, but it is believed the disease can be controlled. The survey is bringing out important facts about growing of immune potatoes and experiments will be undertaken next year in a score of counties. Several varieties believed immune have been found in this state and those being tested at the laboratory in the hard coal region. The general reports on the potato industry favor a good crop and it is surprising the number of counties where potatoes are being extensively grown this summer.

Affect New Crop.—The new Pennsylvania apple packing regulations go into effect with the 1920 pack and copies of the regulations have been sent to growers, shippers and dealers generally. The new law requires information as to origin and variety on the closed packages and fixes the sizes and count. The tolerance is five per cent. State officials believe the new apple law will do much toward standardizing Pennsylvania apple growing, a theme upon which many addresses have been made lately.

Housing Farm Labor.—The problems attending housing of farm labor, especially when from Europe, were given attention in a talk given before the Grangers of three counties in Luzerne county a few days ago. Mr. Connelley said this was a subject which had to be met if the farmers were going to get and keep the foreign labor accustomed to work on the farm. From his observations there is just as much of need for better housing in rural districts as in the cities.

To Demonstrate Shoeing.—In addition to sending out an exhibit of the weeds which are causing loss of valuable dollars and crops in Pennsylvania the State Department of Agriculture is arranging to send exhibits showing how horses should be shod for field work, for road work and for various purposes. Hoofs have been taken and shod with various kinds of shoes, the idea being to show the shoes and the method. The exhibits will be at various fairs.

View of Part of the Press Room of Pennsylvania Farmer After Collapse of Adjoining Wall. The Rear Half of the Press Can be Seen at Right.

Arrests for Milkmen.—Announcement will be made at the Department of Agriculture in a short time of plans for arrest of men conducting milk plants who have not been playing fair. Repeated tests have demonstrated payment being made at a schedule which is not just to the milk producer. Clean cut cases are said to have been secured.

The Telephone Cases.—The complaints against the new telephone regulations will go over until next month, the plans for August hearings having been abandoned, largely because complainants did not want to proceed on an extended scale this month. It will be late in the fall before there is a decision. Meanwhile other utilities continue to file notice of advance in rates, urban as well as rural

Teachers in Demand.—Numerous requests for the good offices of the State Department of Public Instruction in obtaining teachers for rural schools have been made, but the supply is decidedly short. Some of the city districts have also appealed. The rural school teaching situation is doing more to bring about consolidation than almost anything else now.—Hamilton.

NEW YORK LETTER

Vegetable Growers Organizing.—The potato and cabbage growers of Central New York are organizing local units to sell these two products co-operatively, beginning this fall. This is practically the first effort in the state to help growers sell these crops to advantage. W. J. Birdsall, of the division of foods and markets, is assisting in the organizing of the growers.

Potato Cost Sheet.—A farmer who protests the price that potatoes are now bringing, $4 per 165-pound barrel submits a cost sheet of interest to all farmers. He says the cost to him this year per acre for fertilizer was $40 or 1500 pounds per acre; that seed cost $50 per acre, spraying $10 per acre, ploughing, planting, cultivating and harvesting about $50 per acre; interest and depreciation of machinery, $30; rent of ground in his case $20, making a total cost of nearly $200 per acre. His yield was for Cobblers, 50 barrels of firsts, and 10 barrels of seconds per acre. The last two items named runs high for an average, while labor costs will sometimes run higher, and it is feared, unless farmers organize for protection the price of potatoes will run lower.

Practical Service of Bank.—A state bank in Parish, N. Y., is issuing a bulletin to the farmers of the section, listing all things the farmers have for sale, or want to buy. The information was obtained by mailing them postal cards, and the result is proving very helpful.

Stimulating Seed Potato Production.—About 500 potato growers of this state and others participated in a two-day tour of the certified seed potato fields of Cortland county last week, under the management of the State Potato Growers' Association.

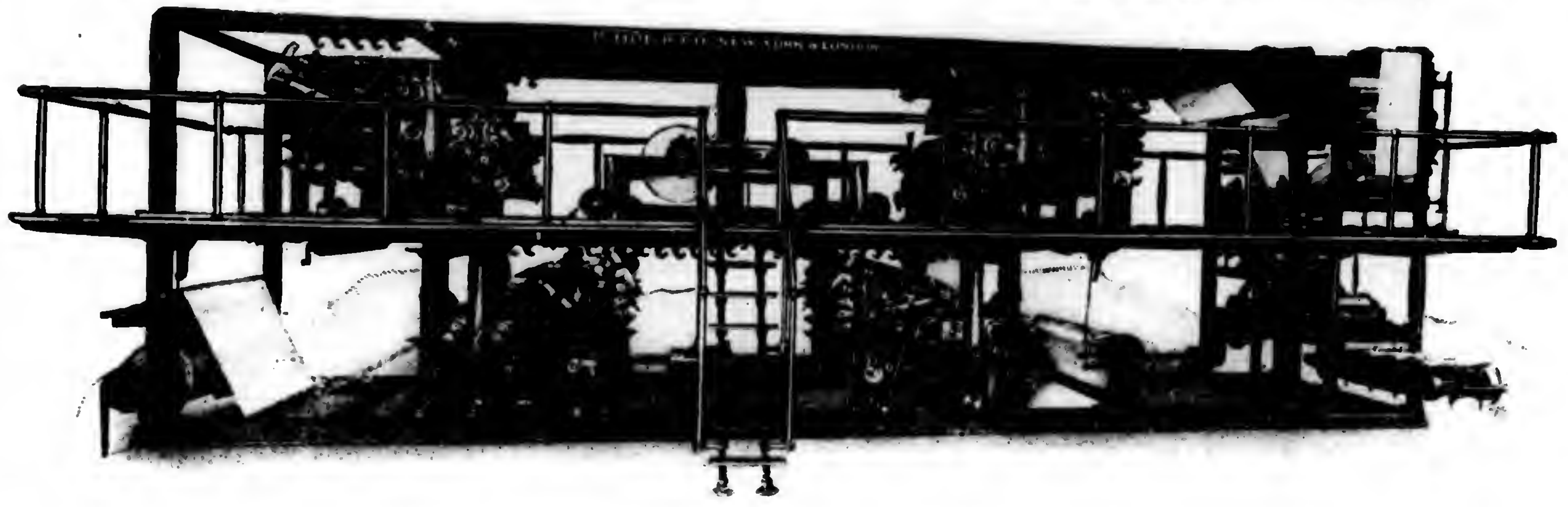
Paper Clothing Exhibit.—The New York College of Forestry is trying to secure from the United States Department of Commerce samples of paper clothing now being made in Europe, to be placed on exhibit at the state and county fairs. Exhibits of artificial silk from waste wood products will be shown.

Hay and Grain Dealers.—Over 100 members of the New York State Hay and Grain Dealers' Association are in sesison in Syracuse. Officials of the leading railroads are conferring with the meeting on transportation problems and the State Horse Association is being held in connection with it. The latter reports much success in its efforts to increase the use of horses in all departments of trade.

Pathologists to Study State Fruit.—The next meeting of the American Pathologist Society will be held in Western New York. State college pathologists attended recent meetings of the Society in Virginia and Lancaster, Pa., bringing to the college on their return foreign pathologists who wish to study work being done at the college.

Buy Seeds Now.—The G. L. F. Exchange advises farmers to buy oil and cottonseed meal, gluten feed and brewers' grains for winter use now as being a suitable time to store feeds. Mill feeds are expected to go lower. The Exchange is doing a big and growing business in feeds.

Mammoth Cheese.—The huge cheese for display and sale at the state fair was made last week requiring all the curd of several northern New York factories. It is eight feet in diameter and weighs nearly 6 tons, and is so large it cannot be shipped by rail, but will be transported by a special truck. It was made by H. A. Reese, of Lowville, maker of monster cheeses for the last three world's fairs.—M. G. F.



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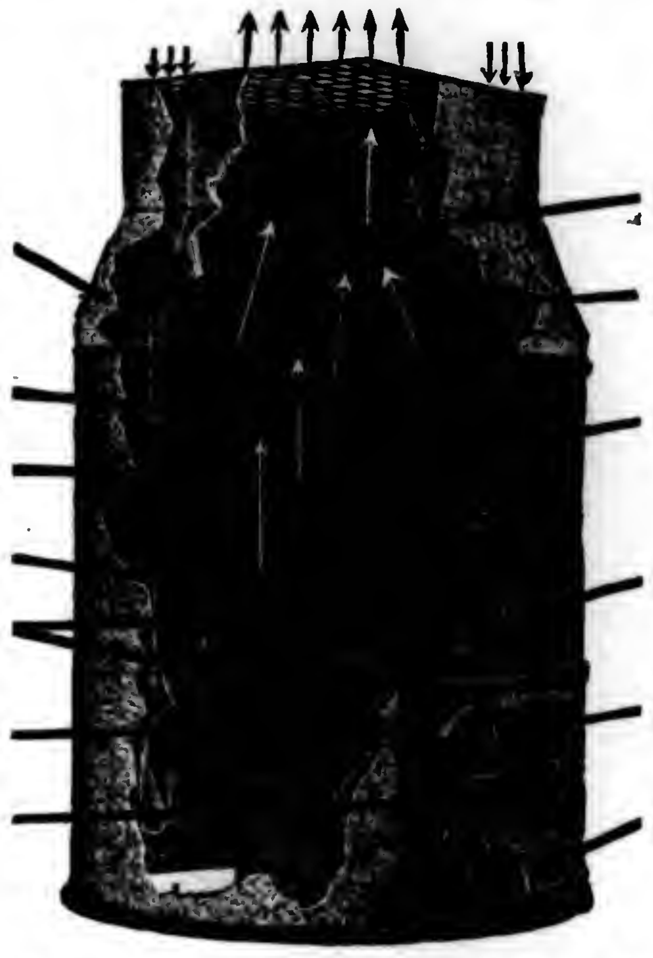

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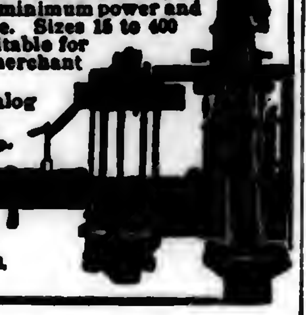

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DAIRY

Situation in the Feed Market

Supply, Demand and Prices Discussed by One who Spends His Time Studying the Feed Market

Sharp declines in prices should not stimulate the purchase of feed on a large scale, at least for the present. The market is in a weak position, and consuming interests will profit on a generous scale if they refrain from providing any buying strength other than what necessarily results from purchases for immediate requirements. It is not yet time to accumulate a supply of feed. Of course, there is the possibility, however slight, that values may turn upward, but present prospects point to a further definite downward trend of values. Even on the basis of current prices, foodstuffs almost generally are still abnormally high, and can yet undergo sharp recessions before reaching a comparatively low level.

Weather conditions will play a vital part in price changes on feedstuff markets for some months. A continuation of present ideal growing weather will, of course, have a depressing influence on the trade, the same as has been witnessed since the declining tendency of values was started on a generous scale the latter part of June. With an actual outturn of a three billion bushel crop of corn, which present prospects now indicate will be realized unless a protracted dry spell or early frost occur, it is easily apparent that prices for the coarse grain and feedstuffs generally will tend to lower levels. The same is true of other crops now in the making, including cotton and flaxseed, alfalfa and tame hay, and even pasturage. A late summer dry spell, which must be considered as a possibility, causing pastures to brown, would naturally force increased consumption of commercial feeds and lessen the surplus available on farms. This, however, is hardly to be expected in view of the highly favorable weather witnessed thus far in the growing season.

The Hay Market

Dairy districts of the East, important consumers of hay, are not buying on as generous a scale as a year ago. Abundant supplies of clover are available in the East from this year's crops, and though shipments on a moderate scale still are under way from Colorado, Kansas, Nebraska and surrounding States of the West to the consuming centers of the East, the requirements of dairymen have been greatly lessened. Nor are other former broad consuming outlets buying alfalfa generously. The South and Southeast, for instance, are making every effort to work off accumulations of high-priced alfalfa, which were bought direct from Oklahoma, New Mexico and Kansas earlier in the sason. The cotton belt has not consumed its hay as rapidly as received, and is therefore buying only sparingly at present. The Central States and Middle West also are light buyers, depending largely on their excellent pasturage.

From a demand standpoint, the market for alfalfa is extremely weak. Yet this is offset to a very great extent by the serious shortage of cars and motive power for moving the hay, which is the basis for the present scant offerings on markets. There is probably sufficient demand to absorb the current movement, which agregates hardly half the total moving from the interior during the summer months of a year or two years ago. So long as the transportation situation remains acute, and this is probable at least during the most active wheat moving season, no sharp depression in prices for alfalfa or other varieties of hay are expected. On the other hand, the prospects for demand do not make the outlook bright for materially higher prices. In Kansas City, the center of distribution for alfalfa, the market is holding around a top of $30 a ton for the best grades, and down to $16.50 for the cheaper offerings.

Declines in alfalfa meal, resulting from the readjustment of alfalfa hay from an old to a new crop basis, have caused sharp downturns in alfalfa molasses and alfalfa grain molasses feeds, used on a generous scale by the East. From the high point of the summer, alfalfa molasses feeds have declined more than $10 a ton, being offered freely without buyers around $40 to $45 a ton in the Middle West. The pasture situation and super-abundance of feed in the country have forced reduced consumption of alfalfa mixed feeds, and of other commercial mixed feeds. So long as values for coarse grains, including corn and oats, and other commodities used in livestock fattening operations, continue on a downward scale, no broad demand is expected to develop for feeds.

Wheat Brans

Bran markets are accomplishing the unexpected—receding sharply in face of extremely light production by mills. As has been the case with all feeds which are sharing in the downward trend in prices, demand and not the supply have provided the basis for the pressure. Bran already has declined about $18 a ton from the high point reached in May. In Minneapolis and Kansas City, offerings are available around $39 a ton, sacked, for spot shipment, and thirty-day shipment feed can be purchased at $38 on these markets. St. Louis quotes bran at $44 to $45 a ton, with Chicago sales at $42 to $44. Sales at slightly below $50 a ton already have been made in the East, but that section is reluctant to accumulate stocks even on such a basis. Northwestern mills which normally dispose of large quantities of bran to the East have been forced to turn to other consuming outlets, but without any marked success in sales.

To what point the declining tendency of prices will carry bran is a question. The consuming trade can look forward with confidence to a sharp increase in the production of the offal, as demand for flour already is increasing and soon will require full capacity operations by mills. Prices for the feed already have declined sharply with light production by mills, therefore the view prevails in market circles that further recessions will occur as the output and offerings on markets are increased. This no doubt will be witnessed unless the demand situation is soon altered. The stocks of bran in the dairy districts of the East and in practically every other consuming section of the country are extremely light, and more generous buying may soon be expected. It is possible, though hardly probable, that demand will increase sufficiently to absorb the enlarged offerings of bran the latter part of August and September and later in the year. However, buyers will hold off until further declines occur, unless a general bull movement develops in the feed market.

Shorts

Shorts have not declined as rapidly as bran, but the reverse is expected in the immediate future. Consumptive requirements of hog producers for shorts usually fall off about this season, and, with increased offerings, which already are adding weight to the market, the extraordinary premium between the light and heavier offal should narrow. Shorts now are selling relatively higher than other feeds, and in many sections of the country feeders have substituted other products, such as a whole ground barley feed, for the wheat offal. Gray shorts or flour middlings have recently sold in the East as high as $70 a ton, but a $60 level will be nearer the actual market within another month, market observers almost generally believe.

Cottonseed Feeds

Extreme caution is necessary in the purchase of cottonseed cake and meal for fall shipment. At the time that trading in the new crop deliveries of cake and meal first began, around $64 a ton in Texas for 43 per cent protein feed, I urged against purchases of the product, believing prices were at too high a level in view of the excellent feed crop conditions. The market since receded to around $53.50 per ton, sacked, for 43 per cent cake and meal, and $50 a ton for loose slab cake, October-November shipment, but even at this level purchases do not seem advisable. It is significant to note that new crop cottonseed is being contracted in Texas by crushers at $35 and less per ton, which compares with $60 and $65 a ton a year ago and a high point during the past crop year of $95 a ton. With prospects pointing to a cotton crop of 12,519,000 bales, compared with 11,329,755 bales a year ago, 12,040,532 two years ago and 11,302,375 bales three years ago, it is very improbable that the prices paid for seed will not rise sharply from their present levels. Nor does it seem reasonable that cake and meal should sell for ferred shipment, October or November delivery, at prices at which offers are now available in view of the present level of seed values. Memphis quotes its cake and meal of 36 per cent protein content around $51 to $52 a ton for October-November shipment. Spot offerings in Texas are available around $60 a ton, and though no important demand prevails, the lack of supplies tends to sustain values for quick shipment.

Linseed Cake and Meal

Linseed cake and meal are receding, though slowly. Crushers of the Northwest are offering cake and meal for spot and September shipment around $62 a ton, basis Minneapolis, a decline of about $2 within a month. No broad demand is in evidence, the bulk of buying originating from small retail merchants.
—Sanders Sosland.

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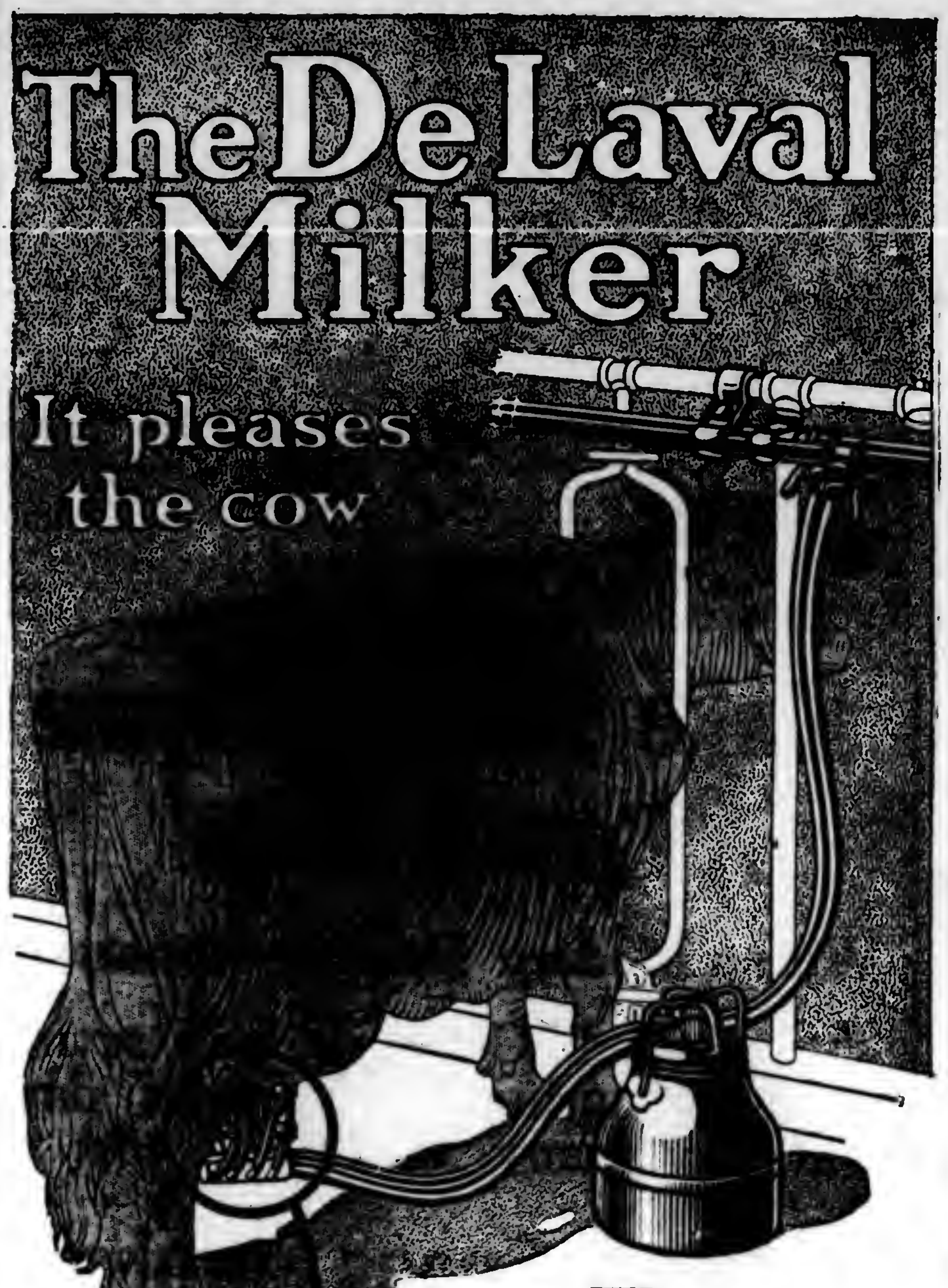

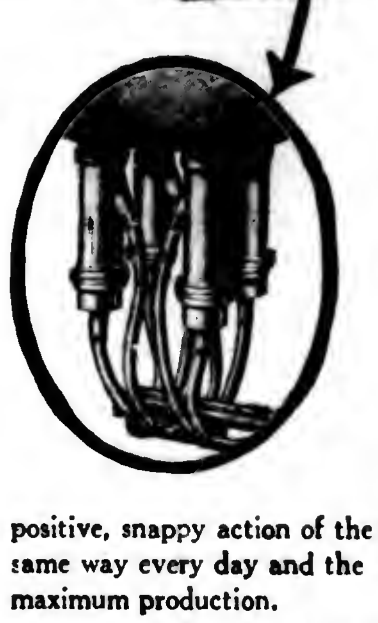

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HORTICULTURE

Advantages of the Home Market

By Dr. J. P. Stewart

As time goes along, we are finding more cases in which people of courage and vision have risked their time and money on the proposition that many of the interior cities of Pennsylvania offer special advantages to the grower of fruits, and we are glad to note that they are now cashing out on their risks. The advent of the automobile, the development of good roads, and incidentally the recent tie-up in transportation by rail, have all assisted in hastening the success deserved. We say "deserved," because it is not an easy matter to be the pioneer in an industry that is likely to require all one's time and resources for several years, in a section or region that is still unproved territory for the industry concerned. It may be of interest therefore to relate some of the observations and conclusions that came to us in a recent visit to a place of this sort.

The place in question is practically on one of the leading improved highways of the state, within half a mile of a station on the leading railway, within eight minutes' drive of a county seat, and within twenty minutes' drive of one of the principal industrial, interior cities of the state. The farm contains about 140 acres, probably 75 of which are planted to fruit of all kinds, ranging in age from three to ten years. Altho only partly in bearing as yet, the net receipts from the place were around $20,000 last year and they are expected to be fully as large this year.

For his cherries this year, the owner received twenty cents a quart right on the ground, and the buyers were so numerous and persistent that he finally had to insert an advertisement in the papers in order to stop them from coming. Similar experience was encountered with the raspberries, except that their shorter supply resulted in a higher price, by about fifty per cent. Incidentally, the Cuthbert as usual has proved to be much the best of the reds, and a yellow variety known as the Golden Queen, has proved to be an excellent bearer and has also become very popular with the ice cream vendors and soda fountain owners, both on account of its color and its unusually high quality.

He also has a very considerable number of plums and pears, ranging from the little blue Damsons up to the Abundance, Burbanks and Bradshaws. In the case of the former, and ranging from the Clapp Favorite and Howell down to the Kieffer, in the pears. For the plums, he usually has no trouble in getting around $4 a bushel, and even the Kieffers are expected to bring from $1.75 to $2.00 a bushel.

The fruit that brings the crowds, however, is the ever-desired peach. A little ad or a signboard informing the community that "the peaches are now ripe, come and get them," is all that is needed to start the procession, and while this movement is on, there is usually no trouble to work off any of the other kinds of fruit that may be available. As an indication of the eagerness with which this fruit is snapped up by the general public, we may mention the case of a man last year who came in a Ford with the back cushion out and the rear doors fastened, who filled the entire rear of his car with loose peaches and drove off toward the southern part of the state, and then returned and repeated the performance the next day. Another indication of the same sort is shown by the fact that the receipts from peaches sold at the orchard in one day last year, were over $2100.

The principal advantages possessed by the place in question may be summarized as follows: The owner is able to let his summer and autumn fruit mature more fully than the man who has to ship and thus he is able to secure the maximum quality and prices. He practically always secures the retail price, or else avoids the haul on any fruit sold in large quantities to dealers. On the latter fruit about the only concession he makes is a refund of the price of the container when it is returned, and he avoids any possibility of misunderstanding between himself and the dealer in regard to either quality or price. He escapes all possibility of loss or serious deterioration in transit, with consequent condemnation at destination. He saves many packages, as many of the people bring their own containers, and throw his packages back. He avoids trouble with the average commission man, which never seems to grow less.

The possession of the home market also permits him to grow many kinds and varieties of fruit, thus extending the income period, and enabling him to distribute his labor to better advantage. Incidentally, the only regular labor that seems to be needed so far consists of two men, besides the owner, whose work is largely supervision. The picking is very largely done by women, who seem to enjoy the work, as he usually has more applicants than needed, and they work for about half the wage demanded by the men.

Practically all kinds of fruit seem to be doing well on this place, which speaks well both for the soil and the management. Most of the apple trees of four years are as large as the average five or six-year-old tree, and many of them have quite a sprinkling of fruit. This is doubtless chiefly due to the fact that they have been left largely alone as to pruning, with the exception of some varieties, such as the Winter Banana, which threw out such long whip-like branches that it was thought desirable to head them back a bit for the first two or three years.

The pears also seem to be doing very well here, both in their growth and freedom from blight, which is in rather refreshing contrast with the performance of this fruit in most localities. Where pears really are at home and are handled right, they are undoubtedly the "lazy man's fruit," as they can get along and turn out a satisfactory product, with less care and attention than any other fruit that I know of. The Kieffer and several other varieties also have a convenient habit of loading their long limbs with fruit to such an extent that the limbs are bent down to the

position where they can be picked readily, after which they swing back out of the way until the next crop is ready.

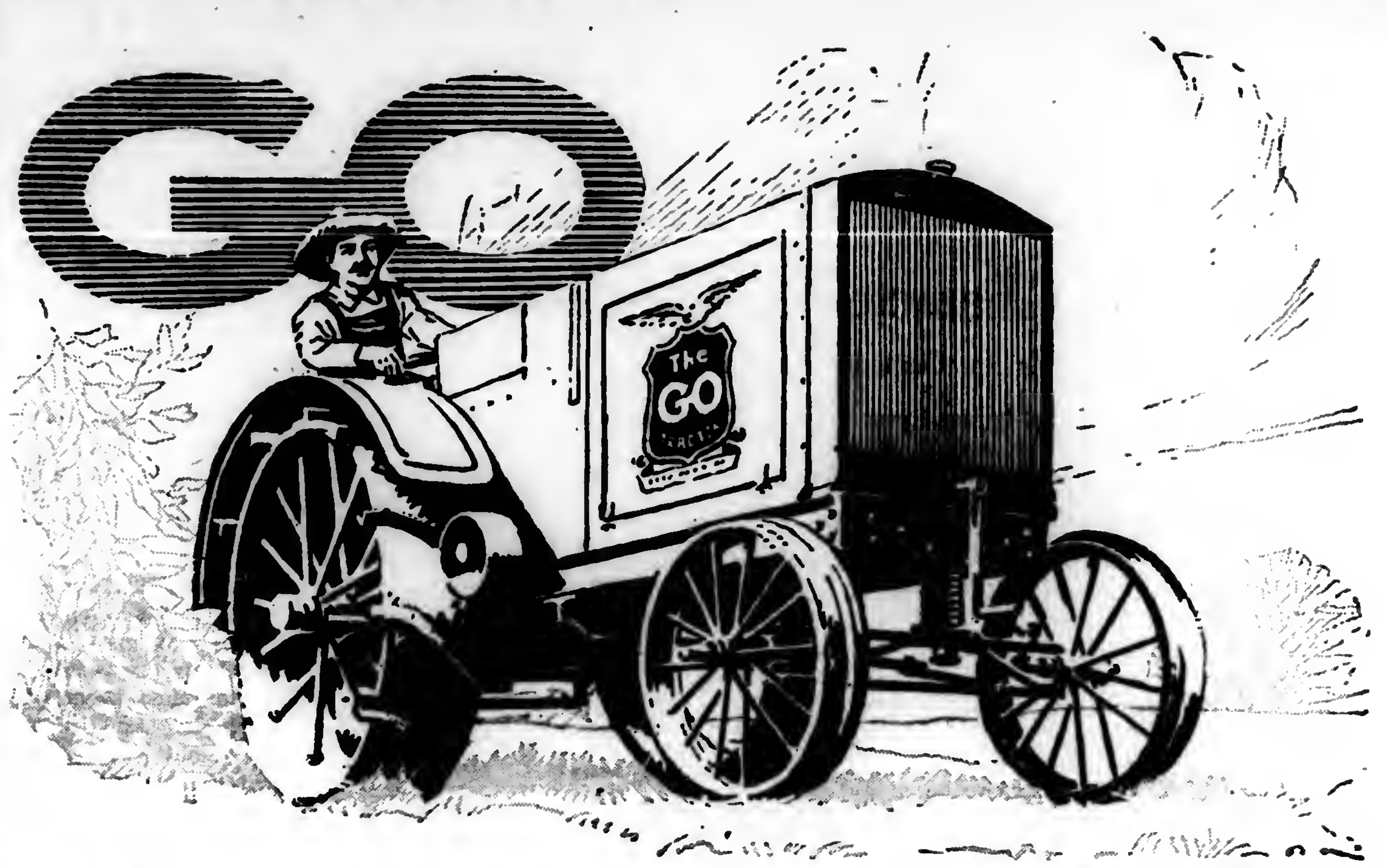
The presence and satisfactory performance of several varieties of pears and plums in this orchard, especially those of Japanese origin, when they are practically disappearing from most distant commercial orchards, suggests the thought that this may be the real function and future of these fruits in our orchard economy. In other words, it may be that they are best grown in a fairly large but diversified orchard with an immediate market, so that the best possible quality can be allowed to develop before picking, with assurance that they will still reach the consumer in top-notch condition.

Even under these conditions, however, there is some question in the writer's mind as to whether the Japanese plums could not be replaced by other varieties with profit. It is worthy of note that the only unhealthy trees that we saw in this orchard were two Jap plums that had developed pronounced symptoms of a disease that is very similar to the "yellows" of the peach. This disease has long been known to attack the Japanese varieties of plums, but whether it is communicable from them to the peach, I am unable to state. Since there was no sign of the "yellows" among the peaches in this orchard, however, it would evidently be very desirable to take no chances on such a communication, and this would of course necessitate the destruction of the diseased plum trees at the earliest possible moment.

The lime-sulphur solution used in this orchard is all made on the place, usually during the winter when little else can be done, and is stored in barrels until needed. The cooking is done in a relatively small kettle, which makes only a few barrels a day, but even with the relatively high cost of labor at present, the owner finds it profitable to follow this course. I recently saw a homemade apparatus in another state, however, which involved the use of three big casks formerly used for cocoanut oil, and in which one man had repeatedly made as much as fifty barrels of the 1-2-1 concentrate per days. This plant used steam and a mechanical mixer which entered the casks from above and thus avoided leaks. It also had a coarse wire screen with about a one-inch mesh placed above the paddles of the mixer, which held the lime off of the paddles until it was completely slaked, which avoided a lot of trouble previously experienced from this source.

"Were you very sick with the 'flu' Rastus?"

"Sick, sick! Man, ah looked in dat casually list for mah name."



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42 Broadway New York

Building Character in Children

By Memory Gems of Fortitude

Rain! rain! rain! Would it never stop! Little Mary stood on one foot at the window, watching it ruefully, while tears stole down her cheeks.

"Mamma, don't you think it may clear up in time for me to go anyway?"

Mother was mending. She paused to scan the sky, putting her arm about her young daughter.

"No, dear, I dont' believe it will. Besides, the roads are so very muddy, and I am afraid the freshet is too high to ford. So it seems to me that my little girl will have to give up the party today."

Mary's lips quivered, and a great lump rose in her throat; she was feeling sorry for herself. Mother had told her she might go to this cherished party if she would be a good girl at home and school, doing her very best in all her lessons, and being faithful in all her assigned tasks. Almost all her little friends would be there.

Out on the lawn the tulips smiled at her gaily but Mary did not even notice them. Then a little chickadee, in saucy velvet cap, flitted to the old apple tree, played about the twigs, and finally, with a cheery chick-a-dee-dee-dee, whirred off on swift wings, unmindful of the weather. When he flew away, Mary felt lonesome for more just such companionship. She wandered off and found old Teddy, the dog, curled on a rug on the porch. Throwing her arms about his faithful neck, Mary gave vent to quiet tears, and found relief. But even after this she felt sorry for herself.

At this point Mother laid down her work and called Mary to her.

"Mary, when I went to school we learned a great many "memory gems." One of them has been trying to come back to me all morning, and I believe I have all its lines now. It goes about like this:

"Suppose, my little lady,
Your doll should break her head;
Could you make it whole by crying
Till your eyes and nose were red?
And wouldn't it be better
To take it as a joke,
And say you're glad 'twas dolly's
And not your head that broke?

A glimmer of a smile played about Mary's lips.

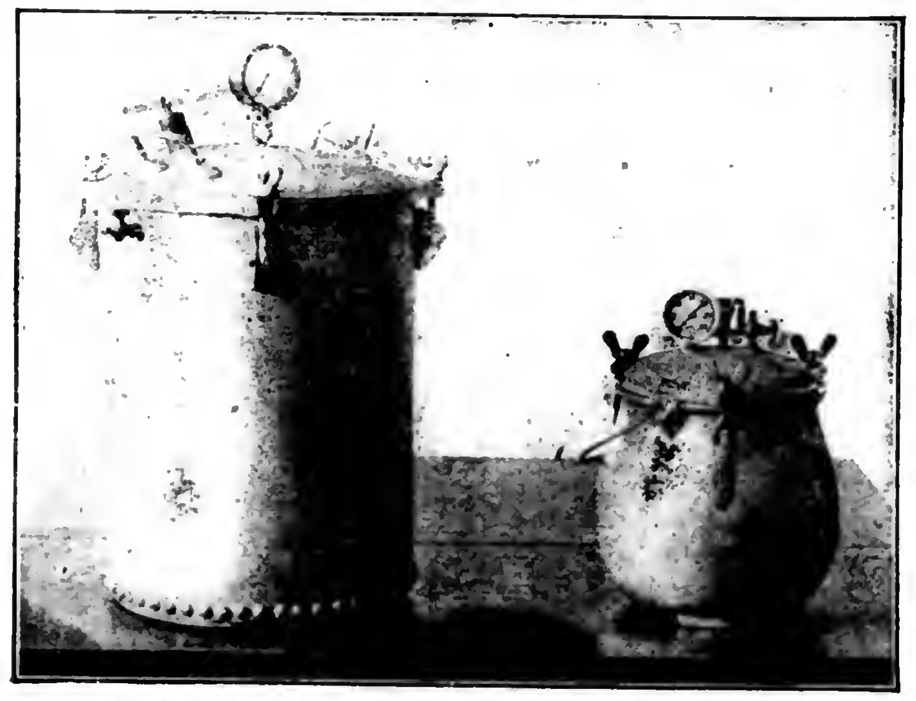
"Suppose you're dressed for walking,
And the rain comes pouring down;
Will it clear up any sooner
Because you fret and frown?
And wouldn't it be better
For you to smile than pout,
And so make sunshine in the house
When there is none without!"

Mary looked guilty and earnest.

"Suppose your task, my little man,
Is very hard to get;
Will it make it any easier
For you to sit and fret?
And wouldn't it be better
Than sitting like a dunce,
To get to work in earnest,
And learn the thing at once!"

"There, what do you think?"

"Yes,' answered Mary, "I think it would. Did you learn that at school when you were a girl?"



Steam Pressure Cookers

The larger one is made of boiler iron, and will hold 12 to 18 cans. The smaller one is cast aluminum, and is a good medium size for household every-day use. Such a pressure cooker reduces the time of cooking canfuls one-half to one-third, and where time and fuel are an object, as they are on most farms where much canning must be done, and where large amounts of meat must often be cooked, one of these types of cookers will be worth while.

"Yes, and heres' another written by one of the Cary sisters Alice or Phoebe, I don't know which. They lived in a big house north of Cincinnati, O. I have been to visit their old home; it is called Clovernook. At present it is used as a home for the blind. It is wonderful to see the work these blind people do. I remember that all the interior woodwork of the house was white, pure gleaming white, and I could scarcely believe it when they told us that the blind folks themselves keep it clean. And they make beautiful things with their hands, necklaces of beads, work bags and purses, napkin rings, raffia baskets, and ever so many other things.

"When these Cary sisters were girls they helped about the house, just as you do. If, when they washed dishes, they had thought of nothing but the dishes, and what a bore it was to wash them three times a day, they would never have written all the lovely things they did write. But they made blessings out of tasks. It is told of them that when they stood at the table washing dishes, they would have some beautiful poem pinned on the wall before them, and they would memorize it while they worked. And in this way their work speeded, and was finished so much faster, and they stored in their minds at the same time and for all time, beautiful thoughts and ideas which make life sweeter."

"Is that the way you learned this poem, Mother, by pinning it up on the wall before you while you washed dishes?"

"I don't remember just how and when I memorized this one, but I have learned many that way, I often had poems pinned up beside my mirror where I could study them while dressing for school. And when I taught Sunday school I found ironing time especially good for working out Sunday school lesson; I'd have my journal on the table handy, and would read a few thoughts there, and then think about them, and of illustrations to use in teaching, while my hands ironed dresses and shirts.

"But what I wanted to tell you this little poem, "Suppose." And now, suppose you get your big blank book and copy it in there. I'll write it on an old piece of paper for you."

Mary skipped off and got the book, pen and ink, and was soon happily busy copying it neatly. Not till she came to the second verse did she again think of the party she was missing, and then she smiled bravely.

"Mother, I'm going to learn this by heart, in the same way you and the Cary sisters learned things, I'll begin with the dinner dishes."

"Fine! And, Mary, my own girl, remember, this is a 'memory gem.' What do those words mean to you?"

"Well, a gem is a precious stone, like a diamond or ruby, something of that sort."

"Yes."

"And memory—that's something you remember."

"All right."

"Memory gem must then be something precious stowed away in your mind."

"Very good. And this sort of gem is far more valuable than the ones people purchase at the jeweler's; they make life sweeter and richer. The gems at the jeweler's cost many dollars, and often cause unhappiness; but these gems cost nothing but the gathering, and they bring their owner true happiness, and make her the more able to inspire joy and courage in the hearts of others. No thief can steal them. They help over hard places n the road. My precious daughter, I'd rather have your mind rich with beautiful and true thoughts than your fingers and arms weighted with jewelry. And, do you know, they are far more attractive. Beuatiful thoughts make faces truly beautiful. A while ago, when you were discontented because you could not go to the party, you were not one bit pretty. But now, with good happy thoughts in your mind, you are good to see. Suppose, my litle lady, you keep it up!"—Mrs George Rinehart, Virginia.

HUMAN FAT

Our fat is not a mere ornament or visitation of Providence, as the case may be. It has several good uses. It furnishes heat to the system, and heat translated by the body means energy. We can live for quite a time without food by consuming the surplus fat in our system, for not nearly all our fat is visible. Every nook and corner of our anatomy is padded with it—the places between the muscles, the spaces between the internal organs. At killing time look at a carcass. All thru the meat run the tiny lines of fat. All around the organs are the films of "fascia" holding networks of fatty tssue. We are built exactly the same way. The eyes are cushioned on fat. When people grow thin they become hollow-eyed because the fat is consumed and the eyes fall back in the sockets.

Our nerves are imbedded in a sheath of fat. If it is broken, that nerve is exposed to grating against some part of the surrounding tissue, and we get the painful sensations of neuritis. Regarding the fact that fat people have neuritis, it should be explained that the fat that surrounds the nerve is a sort of cylinder—"sheath of Schwan," it is called. It is a layer of fat disposed around the nerve much as a rubber hose that would fit rather tightly around a pencil. The absence of the fat is not due to general emaciation; it is a mere break in the sheath and not an extended lesion. Nerves, as you know, take the message where they find it and ask no questions. So a nerve that gets a sensation at the wrong place will refer the sensation to the proper nerve ending, and that is why a person with an amputated leg can have a pain in the toe of the foot long buried.

In cold, in hunger, in sickness, we draw upon our fat supply. Only when there is a great excess is there discomfort. While some of us are born to be fatties, and no amount of exercise will make us thin, suitable exercise will enable us to carry our fat so that it is less cumbersome. Evenly distributed, a large amount of fat can be carried gracefully and with no fear of injury. Never resort to the advertised fat-reducers. Great injury to health has been done by many of them.

On the other hand, those of us who are too slim can find fat-encouraging menus, in which sugar, starch and fats predominate. But neither ambition is always crowned with eminent success. Our natures seem to have a great deal of say about the matter.—Harriett Boewig.

ART IN COOKING CABBAGE AND ONIONS

"I can eat cabbage like that and it don't give me indigestion," remarked a delicate looking girl.

A large pot of water, to which one teaspoon salt had been added, was boiling. The head of young, tender cabbage was prepared by removing the coarse outer leaves and was cut into quarters. It was then put into the boiling water and kept boiling 30 minutes without a cover on the pot. Had it been a tough, old cabbage it would have had to be cooked 10 or 15 minutes longer. The water was drained off, and the cabbage season and served.

Onions, cauliflower, turnips, brussels sprouts, kohlrabi, leeks, rutabagas, kale as well as cabbage keep a delicate color and flavor, and are readily digested when prepared like the cabbage just described.

If there is not enough water in the pot or the cover is on while these vegetables are cooking, certain substances are not kept separated enough or are not allowed to escape into the air, so they combine to form the combinations which give the vegetables a yellow or brown color, a stronger odor and flavor, which interferes with the digestion of them.

When meat is cooked with these vegetables it should be cooked first so that it will be done as soon as the vegetables are done when they have cooked for 30 or 45 minutes. Do not cover the kettle while a vegetable of this type is cooking with the meat.—Edith Allen.

RELISHES MADE OF TOMATOES

Tomato and Celery Relish—Finely chop 1 onion, 1 large green sweet pepper, 1 large bunch of celery and 1½ pints tomato. Add 2-3 cup mild vinegar, 1 clove, 2 allspice berries, 2 tablespoons sugar and 1 tablespoon salt. Bring gradually to the boiling point. Reduce heat and simmer gently 1½ hours.

Tomato Jelly.—Wash tomatoes that are just ripe and cut into quarters, cook over a very slow fire until soft, and then drain thru a jelly bag. Do not squeeze the bag if a clear jelly is desired. Measure the juice and, because tomato juice will not "jell" when used alone, for each quart of juice add the grated inner white part of the rind and the juice of 1 lemon, because the lemon juice, and particularly the white part of the lemon rind contain pectin, the substance that makes juices jelly. Bring to a boil and boil 20 minutes. Measure again, and for each cup add 1 cup sugar, and cook until the mixture will flake off the edge of the spoon.

Tomato Jam.—Scald 6 or 7 tomatoes, remove the skins and cut into quarters. Weigh, and for each pound allow ¾-pound sugar. Add the juice of 2 lemons and 2 oranges, ½ teaspoon cloves and 1 teaspoon cinnamon; cook until thick. When nearly done add 1 cup seeded raisins and ¼-pound finely shredded candied orange peel and 1-5 pound shredded candied ginger. Pour into sterilized glasses, and when cold cover with paraffin.

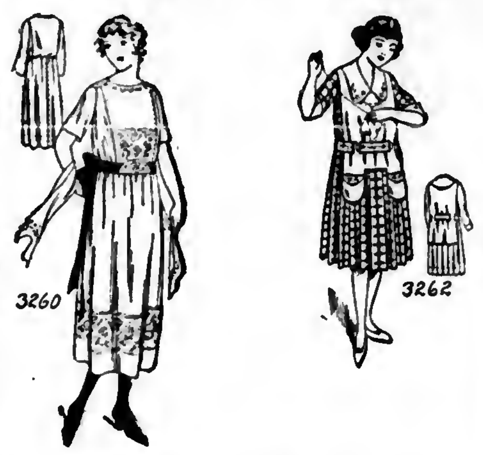
Green Tomato Preserves.—Put ¾-pound granulated sugar into an enamel saucepan with enough water to melt it. Cut 2 pounds green tomatoes into quarters, and slice 1 lemon thin. Add these to the sugar, and cook as little as possible, until the tomatoes are tender and transparent.—Mrs. F. W. Stillman, Union Co., New Jersey.

PENNSYLVANIA FARMER PATTERNS

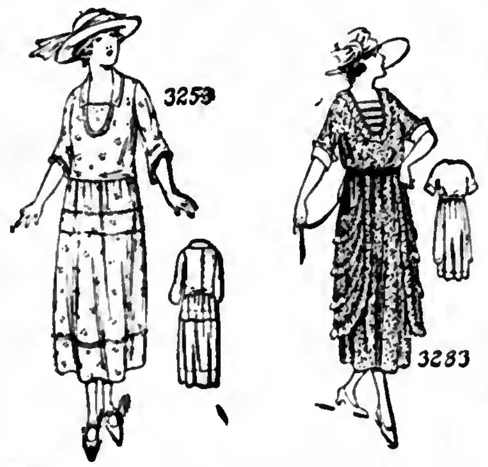
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

3260.—Smart Summer Frock.—The pattern is cut in 3 sizes: 16, 18 and 20 years. An 18-year size will require 3⅞ yards of 40-inch material for waist and skirt, and 1¼ yard for the jumper. As here shown, pongee in a natural shade, embroidered in white, was used. This is a good model also for batiste or voile, linen also gingham. Width of skirt at lower edge is a little over 2 yards. Pattern, 10 cents.

3262.—Dress for Growing Girls.—The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. A 12-year size will require 4½ yards of 27-inch material for the dress, and 2¼ yards for the "jumper." Plaid gingham in blue tones is here combined with plain chambray. Pattern costs 10 cents.



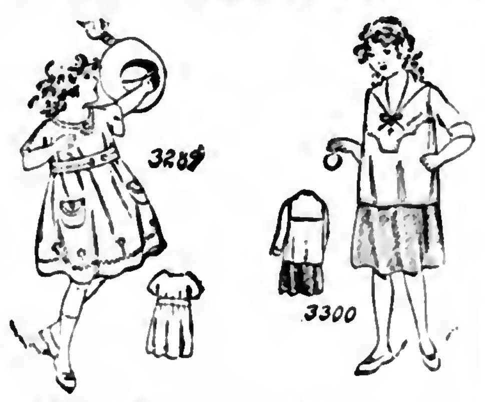
3253.—A Becoming Youthful Dress.—The pattern is cut in 3 sizes: 16, 18 and 20 years. A 16-year size will require 4½ yards of 44-inch material. Taffeta, gingham, voile, organdie, poplin, chambray or crepe are suitable materials. The width of the skirt at lower edge is 1⅞ yard. Pattern, 10 cents.



3283.—Frilly Frock.—Pattern is cut in 3 sizes: 16, 18 and 20 years. An 18-year size will require 5⅝ yards of 36-inch material. The width of the skirt at its lower edge is about 1½ yard. This is a pretty model for organdie, foulard, taffeta or crepe. Ruffles or ruchings of contrasting material or ribbon are sometimes used. The chemisette may be of white batiste, net or lace. The waist may be finished in "slip on" style or with back closing. Pattern, 10 cents.

3289.—A Cool Dress for Warm Days.—The pattern is cut in 5 sizes: 2, 4, 6, 8 and 10 years. A 6-year size will require 2¾ yards of 36-inch material. The dress may be finished to slip over the head, but shoulder closing is arranged for in the pattern.

This is a good style for inexpensive materials, such as unbleached muslin, calico, repp, poplin, cambric and voile. Embroidery or a simple finish in outline stitches is pretty for decoration. Pattern, 10 cents.



3300.—Middy Blouse Costume.—The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. A 10-year size will require 3⅛ yards of 27-inch material for the blouse, and 2⅛ yards for the skirt. The skirt may be of the same material as the waist. Serge, gabardine, khaki, plaid and checked suiting are good for a separate skirt. Gingham, drill, jean, wash silk, madras, chambray, khaki and poplin may be used for the blouse. Pattern, 10 cents.

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POULTRY

DRAWN VS. UNDRAWN POULTRY

The investigations made by the United States Department of Agriculture are: (1) Undrawn poultry decomposes more slowly than does poultry which has been either wholly or partly eviscerated; (2) "full drawn" poultry, completely eviscerated with head and feet removed decomposes the most rapidly; (3) "Boston drawn" and "wire drawn" stand midway between the undrawn and "full drawn" in speed of decomposition, the "wire drawn," which is most like the undrawn, being usually the better; and (4) that these deductions apply to dry-picked, dry-chilled, dry-packed, unwashed fowls, which have been marketed with what the market would call "prompt."

The general argument against drawing fowls, or cutting off their heads, when shipping to market, is that such practices permit the air to get inside the carcass and cause the flesh to become tainted. If the head is cut off, it should be done with a sharp knife or hatchet, and then the blood carefully washed off, the skin drawn forward over the neck and tied.

The following conclusions from recent American experiments are of interest:

Under precisely the same conditions of temperature and humidity, drawn fowls will keep from 20 to 30 days longer than those not drawn. The presence of undigested food and of excrementitious substances in animals which have been killed, favors tainting of the flesh and general decomposition. The viscera are the first parts to show putrescence, and allowing these to remain within the body cannot do otherwise than favor infection of the flesh with bacteria and ptomaines, even if osmosis does not actually carry putrid juices to contagious tissues.

Some years ago Dr. P. T. Woods used a strong argument against drawing market poultry. He said chickens sent to market should never be drawn and claims that the undrawn carcass is objectionable because of the possibilities of osmosis carrying taint or poisonous matter to the flesh is exaggerated. Granted that in some cases where fowls are not properly handled there exists a possibility of infection of the meat, it is not half so dangerous as the many chances of infection in drawn fowls. As a matter of fact, where the bird is properly handled before killing, the chance of infection is practically nil.

After the carcass leaves the hands of the poultryman, and is on its way to market, it passes beyond his control. If it is drawn, and has any distance to go, it may mold inside; or if a fly does not "blow" in it, there is a large exposed surface hidden from sight, which may become infected by some means during transit. If moldy, sour, or fly blown (if it travels any distance, it is pretty sure to be one of these, or all three), it is no longer salable, at least for anything like a fair price, and it is not desirable as food.

"In dealing with market poultry we have to deal with many unknown factors," says Dr. Wood. "So far as I am concerned, I had rather take my chances on an undrawn fowl, no matter how poorly handled before being killed, than to have a fowl that has had the filthy fingers of some person unknown (perhaps diseased) scratching about tearing out the entrails, and following up the operation with washing out the carcass with not overclean water. The chances of infection from such sources are far more numerous than any that may exist from the intestinal contents and possible osmosis. Again, if the intestines are left in, you may have the opportunity of learning something about the fowl's condition at the time it was killed and whether or not it was healthy."

The marketmen are in the business for what there is in it, and it is for their interest to keep and sell the best. It is necessary to expose their goods for sale and a carcass of drawn poultry hung in the market still makes an ideal place for a fly to get into the abdominal cavity out of sight, and deposit its eggs. The result is that the customer finds the carcass "fly blown" or worse—maggoty. As a matter of fact, opening up the abdominal cavity and removing the viscera exposes a larger surface to bacteria infection, while in the undrawn fowl the infection if any, is confined in the intestines, except such of the objectionable matter which may pass thru the walls of the intestines by osmosis. If poultry is properly handled before killing, and is properly cooled before packing, there will be very little if any contamination from the empty intestines.—Michael K. Boyer, Atlantic Co., New Jersey.

MAKING FALL AND WINTER HEAVY LAYING SEASONS

Artificial illumination is the latest development in poultry management. It controls egg production by regulating the time of laying and so regulating the price of eggs. The hen is a native of the tropics and in the north she has changed her habits but not her nature. During the long winter darkness, the hen feels the drain on her system from the lack of food during the early morning hours. A day and night evenly divided is what her system is adjusted to. Lighting early in the morning or early in the evening will restore the normal daylight balance during the fall and winter, and it has proved a regulator of egg production.

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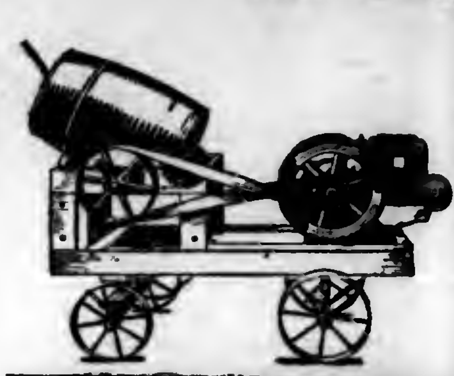
On June 25, 1920, we purchased 25 pure bred Pekin ducklings from a reliable poultry farm in New York State. I mixed the ration myself, consisting of the following: 8 lbs. rolled oats, 8 lbs. bread crumbs, 8 lbs. wheat middlings, 2 lbs. bone meal, 2 lbs. meat scrap. This was fed five times a day, moistened with water. Butter milk would be better. Our ducks are one month old now and weigh two and one-half pounds each. Now this is growing them out, and I think it is worth telling other people. Once before I purchased 88 ducklings and fed them on cracked corn and lost every one. So I am convinced a young duck should have soft feed and the above ration is the best we have ever found.—H. M. McV., Blair Co., Pa.



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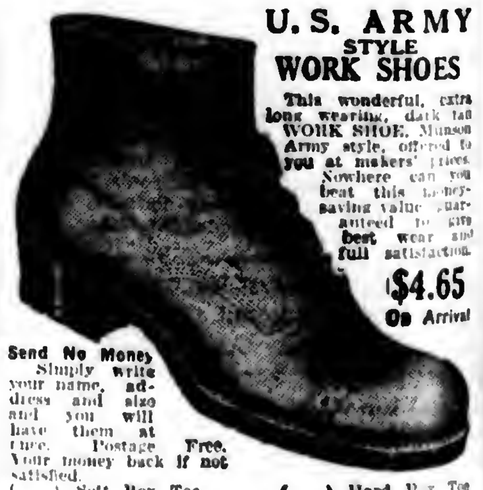

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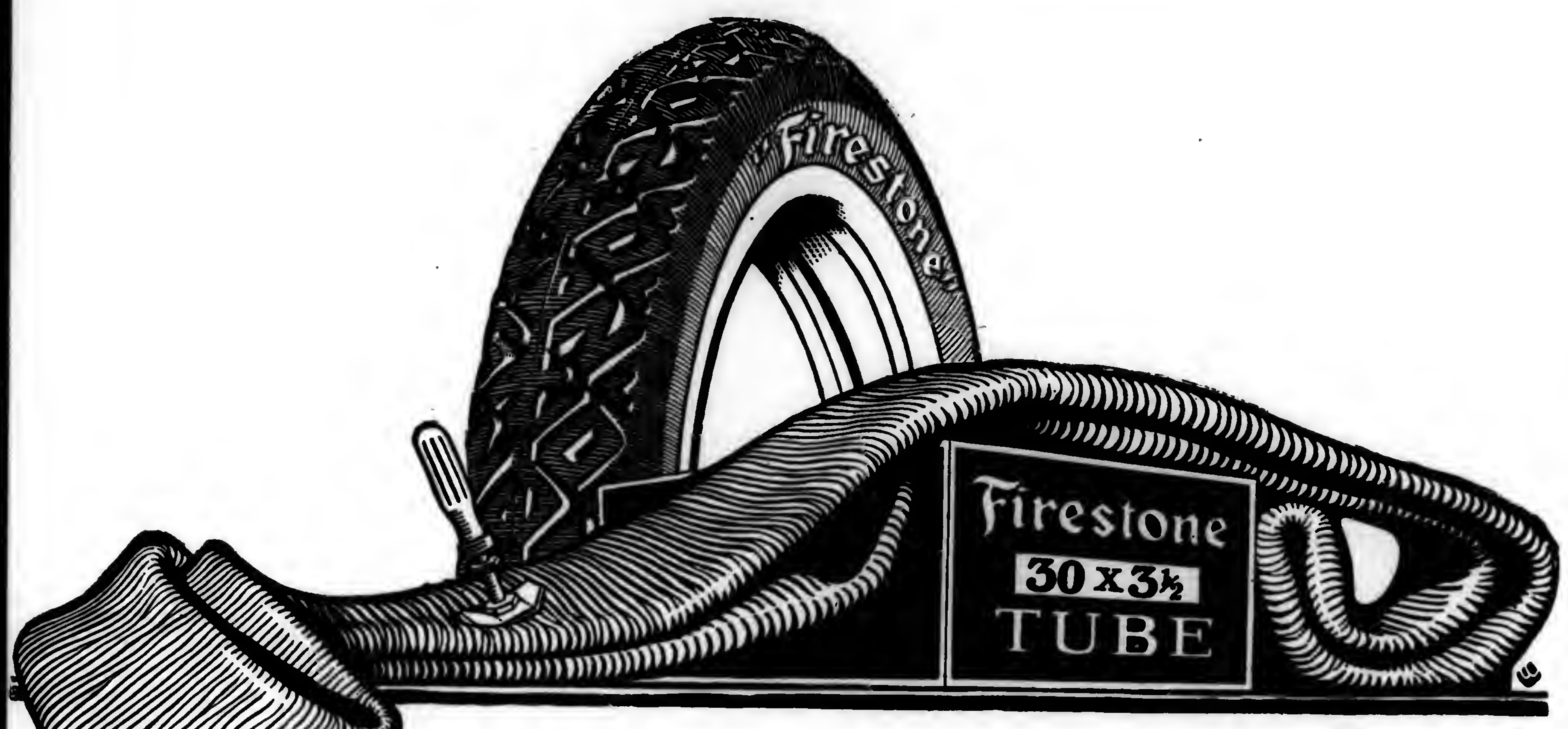

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Firestone

Whispering Smith

by Frank H. Spearman

CHAPTER XXIV.

Between Girlhood and Womanhood

(Continued from Last Week).

"Until you made verse and I spoiled it. But I think it is because I don't understand things that I am so afraid. I am not naturally a coward. I'm sure I could not be afraid of you if I understood things better. And there is Marion. She puzzles me. She will never speak of her husband—I don't know why. And I don't know why Mr. McCloud is so hard on Mr. Sinclair—Mr. Sinclair seems so kind and good-natured."

Whispering Smith looked from the fire into Dicksie's eyes. "What should you say if I gave you a confidence?"

She opened her heart to his searching gaze. "Would you trust me with a confidence?"

He answered without hesitation. "You shall see. Now, I have many things I can't talk about, you understand. But if I had to give you a secret this instant that carried my life, I shouldn't fear to do it—so much for trusting you. Only this, too, as to what I say, don't ever quote me or let it appear that you any more than know me. Can you manage that? Really? Very good; you will understand why in a minute. The man that is stirring up all this trouble with your Cousin Lance and in this whole country is your kind and good-natured neighbor, Mr. Sinclair. I am prejudiced against him; let us admit that on the start, and remember it in estimating what I say. But Sinclair is the man who has turned your cousin's head, as well as made things in other ways unpleasant for several of us. Sinclair—I tell you so you will understand everything, more than your cousin, Mr. McCloud, or Marion Sinclair understand—Sinclair is a train-wrecker and a murderer. That makes you breathe hard, doesn't it? but it is so. Sinclair is fairly educated and highly intelligent, capable in every way, daring to the limit, and, in a way, fascinating; it is no wonder he has a following. But his following is divided into two classes: the men that know all the secrets, and the men that don't—men like Rebstock and Du Sang, and men like your cousin and a hundred or so sports in Medicine Bend, who see only the glamour of Sinclair's pace. Your cousin sympathizes with Sinclair when he doesn't actually side with him. All this has helped to turn Sinclair's head, and this is exactly the situation you and McCloud and I and a lot of others are up against. They don't know all this, but I know it, and now you know it. Let me tell you something that comes close to home. You have a cowboy on the ranch named Karg—he is called Flat Nose. Karg was a railroad man. He is a cattle thief, a train robber, a murderer and a spy. I should not tell you this if you were not game to the last drop of your blood. But I think I know you better than you know yourself, though you never saw me until last night. Karg is Sinclair's spy at your ranch, and you must never feel it or know it; but he is there to keep your cousin's sympathy with Sinclair, and to lure your cousin his way. And Karg will try to kill George McCloud every time he sets foot on this ranch, remember that."

"Then Mr. McCloud ought not to be here. I don't want him to stay if he is in danger! "exclaimed Dicksie.

"But I do want him to come here as if it mattered nothing, and I shall try to take care of him. I have a man among your own men, a cowboy named Wickwire, who will be watching Karg, and who is just as quick, and Karg, not knowing he was watched, would be taken unawares. If Wickwire goes elsewhere to work some one else will take his place here. Karg is not on the ranch now; he is up North, hunting up some of your steers that were run off last month by his own cronies. Now do you think I am giving you confidence?"

She looked at him steadily. "If I can only deserve it all." In the distance she heard the calling of the men at the river borne on the wind. The shock of what had been told her, the strangeness of the night and of the scene, left her calm. Fear had given way to responsibility and Dicksie seemed to know herself.

"You have nothing whatever to do to deserve it but keep your own counsel. But listen a moment longer—for this is what I have been leading up to," he said. "Marion will get a message tomorrow, a message from Sinclair, asking her to come to see him at his ranch-house before she goes back. I don't know what he wants—but she is his wife. He has treated her infamously; that is why she will not live with him and does not speak of him. But you know how strange a woman is—or perhaps you don't: she doesn't always cease to care for a man when she ceases to trust him. I am not in Marion's confidence, Miss Dicksie. She is another man's wife. I cannot tell how she feels toward him; and now she has often tried to reclaim him from his deviltry. She may try again, that is, she may, for one reason or another, go to him as he asks. I could not interfere, if I would. I have no right to if I could, and I will not. Now this is what I'm trying to get up the courage to ask you. Should you dare to go with her to Sinclair's ranch if she decides to go to him?"

"Certainly I should dare"

"After all you know?"

"After all I know—why not?"

"Then in case she does go and you go with her, you will know nothing whatever about anything, of course, unless you get the story from her. What I fear is that which possibly may come of their interview. He may try to kill her—don't be frightened. He will not succeed if you only make sure he doesn't lead her away on horseback from the ranch-house or get her alone in a room. She has few friends. I respect and honor her because she and I grew up as children together in the same little town in Wisconsin. I know her folks, all of them, and I've promised them—you know—to have a kind of care of her."

"I think I know."

He looked self-conscious even at her tone of understanding. "I need not try to deceive you; your instinct would be poor if it did not tell you more than I ought to. He came along and turned her head. You need fear nothing for yourself in going with her, and nothing for her if you can cover just those two points—can you remember? Not to let her go away with him on horseback, and not to leave her where she will be alone with him in the house?"

"I can and will. I think as much of Marion as you do. I am proud to be able to do something for you. How little I have known you! I thought you were everything I didn't want to know."

"It's nothing," he returned easily, "except that Sinclair has stirred up your cousin and the ranchers as well as the Williams Cache gang, and that makes talk about me. I have to do what I can to make this a peaceable country to live in. The railroad wants decent people here and doesn't want the other kind, and it falls on me, unfortunately, to keep the other kind moving. I don't like it, but we can none of us do quite what we please in making a living. Let me tell you this"—he turned to fix his eyes seriously on hers: "Believe anything you hear of me except that I have ever taken human life willingly or save in discharge of my duty. But this kind of work makes my own life an uncertainty, as you can see. I do almost literally carry my life in my hand, for if my hand is not quicker every time than a man's eye, I am done for then and there."

"It is dreadful to think of."

"Not exactly that, but it is something I can't afford to forget."

"What would become of the lives of the friends you protect if you were killed?"

"You say you care for Marion Sinclair. I should like to think if anything should happen to me you wouldn't forget her?"

"I never will."

He smiled. "Then I put her in charge of the man closest to me, George McCloud, and the woman she thinks the most of in the world—except her mother. What is this, are they back? Yonder they come."

"We found nothing serious," McCloud said, answering their questions as he approached with Lance Dunning. "The current is really swinging away, but the bank is caving in where it was undermined last night." He stopped before Dicksie. "I am trying to get your cousin to go to the house and go to bed. I am going to stay all night, but there is no necessity for his staying."

"Hang it, McCloud, it's not right," protested Lance, taking off his hat and wiping his forehead. "You need the sleep more than I do. I say he is the one to go to bed to-night," continued Lance, putting it up to Whispering Smith. "And I insist, by the Almighty, that you two take him back to the house with you now!"

Whispering Smith raised his hand. "If this is merely a family quarrel about who shall go to bed, let us compromise. You two stay up all night and let me go to bed."

Lance, however, was obdurate.

"It seems to be a family characteristic of the Dunnings to have their own way," ventured McCloud, after some further dispute. "If you will have it so, Mr. Dunning, you may stand watch to-night and I will go to the house."

Riding back with McCloud, Dicksie and Whispering Smith discussed the flood. McCloud disclaimed credit for the improvement in the situation. "If the current had held against us as it did yesterday, nothing I could have done would have turned it," he said.

"Honesty is the best policy, of course," observed Whispering Smith. "I like to see a modest man—and you want to remind him of all this when he sends in his bill," he suggested, speaking to Dicksie in the dark. "But," he added, turning to McCloud, "admitting that you are right, don't take the trouble to advertise your view of it around here. It would be only decent strategy for us in the valley just now to take a little of the credit due to the wind."

CHAPTER XXV.

The Man on the Frenchman

Sinclair's place on the Frenchman backed up on a sharp rise against the foothills of the Bridger range, and the ranch buildings were strung along the creek. The ranch-house stood on ground high enough to command the country for miles up and down the valley.

Only two roads lead from Medicine Bend and the south into the Frenchman country; one a wagon-road following Smoky Creek and running through Dale Canyon; the other a pack-road, known as the Gridley trail, crossing the Topah Topah Hills and making a short cut from the Dunning ranch on the Crawling Stone to the Frenchman. The entire valley is, in fact, so difficult of access, save by the long and roundabout wagon-road, that the sight of a complete outfit of buildings such as that put up by Sinclair always came as a surprise to the traveller who, reaching the crest of the hills, looked suddenly down a thousand feet on his well-ordered sheds and barns and corrals.

The rider who reaches the Topah Topah crest on the Gridley trail now sees in the valley below only traces of what was so laboriously planned and perfectly maintained a few years ago. But even the ruins left on the Frenchman show the herculean labor undertaken by the man in setting up a comfortable and even an elaborate establishment in so inaccessible a spot. His defiance of all ordinary means of doing things was shown in his preference for bringing much of his building-material over the trail instead of around by the Smoky Creek road. A good part of the lumber that went into his house was packed over the Gridley trail. His piano was brought through the canyon on a wagon, but the mechanical player for the piano and his wagons themselves were packed over the trail on the backs of mules. A heavy steel range for the kitchen had been brought over the same way. For Sinclair no work was hard enough, none went fast enough, and revelry never rose high enough. During the time of his activity in the Frenchman Valley Sinclair had the best-appointed place between Williams Cache and the Crawling Stone, and in the Stone only the Dunning ranch would bear comparison with his own. On the Frenchman Sinclair kept an establishment the fame of which is still foremost in mountain story.

Here his cows ranged the canyons and the hills for miles, and his horses were known from Medicine Bend to Fort Tracy. Here he rallied his men, laid snares for his enemies, dispensed a reckless hospitality, ruled his men with an oath and a blow, and carried a six-shooter to explain orders and answer questions with.

Over the Gridley trail from the Crawling Stone Marion and Dicksie Dunning rode early in the morning the day after McCloud and his men left the Stone Ranch with their work done. The trail is a good three hours long, and they reached Sinclair's place at about ten o'clock. He was waiting for Marion—she had sent word she should come—and he came out of the front door into the sunshine with a smile of welcome when he saw Dicksie with her. Dicksie, long an admirer of Sinclair's, as women usually were, had recast somewhat violently her opinions of him. She faced him now with a criminal consciousness that she knew too much. The weight of the dreadful secret weighed on her, and her responsibility in the issue of the day ahead did not help to make her greeting an easy one. One thing only was fixed in her mind and reflected in the tension of her lips and her eyes: the resolve to keep at every cost the promise she had given. For Dicksie had fallen under the spell of a man even more compelling than Sinclair, and felt strangely bounden to what she had said.

Sinclair, however, had spirit enough to smooth quite away every embarrassment. "Bachelor's quarters," he explained roughly and pleasantly, as he led the two women toward the house. "Cowmen make poor housekeepers, but you must feel at home." And when Dicksie, looking at his Indian rugs on the floors, the walls, and the couches, said she thought he had little to apologize for, Sinclair looked gratified and took off his hat again. "Just a moment," he said, standing at the side of the door. "I've never been able to get Marion over here before, so it happens that a woman's foot has never entered the new house. I want to watch one of you cross the threshold for the first time."

Dicksie, moving ahead, retreated with a laugh. "You first, then, Marion."

"No, Dicksie, you."

"Never! you first." So Marion, quite red and wretchedly ill at ease, walked into the ranch-house first.

Sinclair shone nowhere better than as a host. When he had placed his guests comfortably in the living-room he told them the story of the building of the house. Then he made a cicerone of himself, and explained, with running comments, each feature of his plan as he showed how it had been carried through the various rooms. Surprised at the attractiveness of things, Dicksie found herself making mental notes for her own use, and began asking questions. Sinclair was superb in answering, but the danger of admiring things became at once apparent, for when Dicksie exclaimed over a handsome bearskin, a rich dark-brown grizzly-skin of unusual size, Sinclair told the story of the killing, bared his tremendous forearm to show where the polished claws had ripped him, and, disregarding Dicksie's protests, insisted on sending the skin over to Crawling Stone Ranch as a souvenier of her visit.

"I live a great deal alone over here," he said, waving Dicksie's continued refusal magnificently aside as he moved into the next room. "I've got a few good dogs, and I hunt just enough to keep my hand in with a rifle." Dicksie quailed a little at the smile that went with the words. "The men, at least the kind I mix with, don't care for grizzly-skins, and to enjoy anything you've got to have sympathetic company — don't you know that?" he asked, looking admiringly at Dicksie. "I've got another skin for you, a silver-tip," he added in deep, gentle tones, addressing Marion. "It has a fine head, as fine as I ever saw in the Smithsonian. It is down at Medicine Bend now, being dressed and mounted. By the way, I've forgotten to ask you, Miss Dicksie, about the high water. How did you get through at the ranch?"

Dicksie, sitting on the piano-bench, looked up with resolution. "Bravely!" she exclaimed. "Mr. McCloud came to our rescue with bags and mattresses and a hundred men, and he has put in a revetement a thousand feet long. Oh, we are regular river experts at our house now! Had you any trouble here, Mr. Sinclair?"

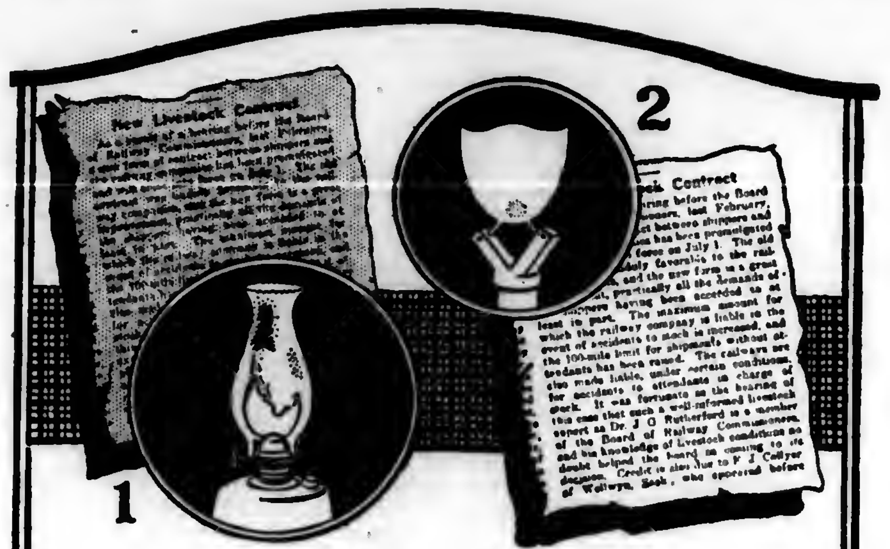
"No, the Frenchman behaves pretty well in the rock. We had forty feet of water here one day, though; forty feet, that's right. McCloud, yes; able fellow, I guess, too, though he and I don't hit it off." Sinclair sat back in his chair, and as he spoke he spoke magnanimously. "He doesn't like me, but that is no fault of his; railroad men, and good ones, too, sometimes get started wrong with one another. Well, I'm glad he took care of you. Try that piano, Miss Dicksie, will you? I don't know much about pianos, but ought to be a good one. I would wheel the player over for you, but any one that plays as beautifully as you do ought not to be allowed to use a player. Marion, I want to talk a few minutes with you, may I? Do you mind going out under the cottonwood?"

Dicksie's heart jumped. "Don't be gone long, Marion," she exclaimed impulsively, "for you know, Mr. Sinclair, we must get back by two o'clock." And Dicksie, pale with apprehension, looked at them both. Marion, quite composed, nodded reassuringly and followed Sinclair out of doors into the sunshine.

For a few minutes Dicksie fingered wildly on the piano at some half-forgotten air, and in a fever of excitement walked out on the porch to see where they were. To her relief, she saw Marion sitting near Sinclair under the big tree in front of the house, where the horses stood. Dicksie, with her hands on her girdle, walked forlornly back and forth, hummed a tune, sat down in a rocking-chair, fanned herself, rose, walked back and forth again, and reflected that she was perfectly helpless, and that Sinclair might kill Marion a hundred times before she could reach her. And the thought that Marion was perhaps wholly unconscious of danger increased her anxiety.

She sat down in despair. How could Whispering Smith have allowed any one he had a care for to be exposed in this dreadful way? Trying to think what to do, Dicksie hurried back into the living-room, walked to the piano, took the pile of sheet-music from the top, and sat down to thumb it over. She threw song after song on the chair beside her. They were sheets of gaudy coon songs and ragtime with flaring covers, and they seemed to give off odors of cheap perfume.

(Continued Next Week).



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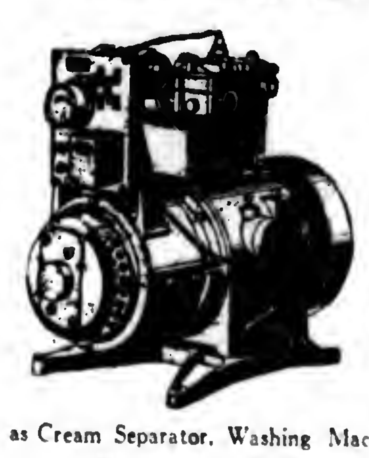

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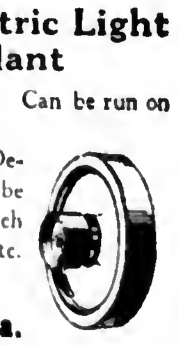

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Markets

PHILADELPHIA PRODUCE

—Aug. 16, 1920.

The hot, sultry, rainy weather of the past several days has had a serious effect on the market in fruits and vegetables of nearly all kinds. Because of the hot damp weather, receivers were unable to carry over their supplies for the following days, as they would not hold up, but in many instances would deteriorate so rapidly as to be almost unsalable on the following day. For this reason the dealers were urging sales on many commodities, and prices show a wide range.

Potatoes are not in heavy supply, but at the same time they are ample for requirements at the prevailing prices. N. J. ⅝-bsk. sold this morning at 90c@$1 for the No. 1s, and 40@60c per bsk. for No. 2s. Eastern Shore potatoes sold at $3.50@4.25 per bbl. for No. 1s and $1.50@2.25 for No. 2s. N. J., sacked potatoes sold at $3.25@3.75 per 150-lb. sack.

A few crop crop sweet potatoes have been on the market, the Eastern Shores selling at $8@10 per bbl. on the No. 1s and $5@6 per bbl. on No. 2s. The first N. J. stock is selling at $2.75@3 per ⅝-bsk. on No. 1s and $1.75@2 on No. 2s.

Vegetables—Green beans are for the most part poor, and prices are taking the wide range of 25c@$1 per ⅝ bsk. with not many good enough to reach top. Beets are dull and draggy at 1@2½c per bunch and 40@65c per bu. hamper for loose packed. Cabbage continues in excessive supply and hard to sell at 10@20c per ⅝-bsk. or 35@65c per bbl., price of bbl. not included. Carrots are easy at 1½@3c per bunch, or 40@65c per ⅝-bsk. for the loose. Celery is not wanted in the hot weather prevailing, and sells very slowly at 25@65c per bunch, with the hearts only bringing 3@6c per bunch.

Corn is plentiful and selling at 50@85c per ⅝-bsk., although some extra fancy brings up to $1 per bsk. Cucumbers continue to glut and as many of them are very poor, the prices range from 10@40c per bsk., with the small pickling cucumbers bringing from 40@75c per basket. Eggplants took another drop today when prices ranged from 30@50c per ⅝-bsk. Lettuce was plentiful today, there being 13 fresh cars of N. Y. state lettuce, the best sold at 75c@$1.50 per box, with some so poor, caused by the hot weather as to be worthless

Onions are showing no material change, the N. J. yellows selling at 45@60c per ⅝-bsk., while the whites sell in a slow way at $1.50@3 per bu. hamper, the top price being made for the small pickling onions. Parsley is in very slow demand at $1@1.25 per bu. hamper. Okra is declining every day during the hot weather, and is selling slowly today at 50c@$1 per ⅝-bsk. There are practically no peas on the market. Peppers are easy at 35@50c per ⅝-bsk.

Romaine is in light supply, but little is wanted at 75c@$1.25 per box. Squash is hard to sell at the extremely low price of 10@20c per basket on the white, while the long green Italian squash sells from 10@35c per ⅝-bsk., the top price being paid for the small sized squash. Tomatoes show the effects of the continued hot, sultry and rainy weather and are very poor and wet, and prices for the most part are very low. While a few extra fancy will command around 75@90c per bsk., the great bulk are so poor as to bring only 15@50c per bsk. Turnips are not wanted in the hot weather and are selling at the low price of 75c@$1 per 100-lb. sack or 25@50c per ⅝-bsk. Watercress is in light supply but sells slowly at 2½@3½c per bunch.

Fruits—Altho there were 8 cars of western cantaloupes here this morning, the market is being well supplied with Md. and Del. and N. J. cantaloupes. By reason of the heavy supplies, low prices are prevailing, the Del. and Md. melons selling at 90c@$1.50 per standard crate of 45, and $1@1.50 per crate of jumbos or 36 melons. The N. J. show the wide range of 75c@$1.50 per ⅝-bsk on No. 1s, with No. 2s at 50@75c per bsk.

N. J. peaches are also plentiful, but they will not keep properly during the hot wet weather and for this reason they have to be disposed of promptly and in order to clean up quickly the low price of 50@90c on No. 1 fruit and 25@35c per bsk. on No. 2 fruit is prevailing. There are still some southern peaches arriving, but they are selling at very irregular prices, being for the most part very poor. Some N. Y. state plums sold this morning at $1.25 per 16-qt. bsk. and $2.25 per bu. bsk. N. J. blackberries are showing the wet weather defects and selling slowly at mostly 20@25c per qt., with an occasional good lot up to 27@30c. Huckleberries are poor and wet, and sell at 15@22c per qt. A few Del. grapes have been on the market and sold around $1.75@2.50 per crate.

N. J. apples are in free supply and moving out steadily at 75c@$1.25 per ⅝-bsk. for fancy apples with poorer grades at 40@60c, and culls, drops and windfalls at 15@35c per bsk. A car of Va. apples sold at 75c@$1.75 per bu., the top price being obtained for the 2½-inch Maiden Blush variety. Va. and Md. watermelons are starting to arrive. The best are selling at $400@550 per car.

Poultry—The market on live poultry is ruling very firm and prices remain practically unchanged with the demand sufficient to absorb promptly all offerings. Fancy heavy fowls are now selling at 39@41c per pound, with the small and medium size fowls at 36@38c, while the white Leghorn fowls bring 35@37c per pound. Old roosters are firm at 25@26c per pound. The market has firmed up a little on broiling chickens and fancy broilers are now selling at 43@50c per lb., with the inferior at 38@43c per lb. Ducks are steady to firm at 30@32c on the old ducks, while the young spring ducks sell at the higher price of 32@35c per lb.

Eggs—Many of the offerings of eggs are showing the usual defects incident to the hot summer months and prices take a wide range according to quality and condition. Strictly fancy selected and candled eggs are jobbing at 53@64c per doz. The current receipts sell at 51c per doz. and the nearby firsts at 53@55c per doz. Western firsts are quotable at 49@52c per doz. and western extra firsts at 53@55c per doz., these prices all being a little advance over prevailing prices last week.

LANCASTER PRODUCE

—Aug. 14, 1920.

Apples, tomatoes, corn and potatoes virtually flooded the markets here today. All other fruits and vegetables were offered in large quantities. Eggs continued to show strengthened prices and sold as high as 55 cents a dozen. Peaches were plentiful and cheaper than at this time last year. The quotations:

Butter and Eggs—Creamery butter, 75c per lb.; country butter, 70@75c per lb.; fresh eggs, 50@55c per doz.; duck eggs, 55c per doz.; goose eggs, 6@7c each.

Poultry—Dressed old chickens, $2.25@2.40 each; dressed young chickens, $1.90@2.00 each.

Vegetables—Beans, 15c per half pk.; cabbage, 10@15c per head; beets, 5@10c per bunch; corn, 25@40c per doz. ears; cauliflower, 15@30c per head; celery, 10@15c per stalk; carrots, 5@10c per bunch; lettuce, 10@20c per head; peas, 40@50c per ½-peck; potatoes 30@35c per ½-peck; potatoes, 30@35c per ½-peck; $2@2.25 per bu.; sweet potatoes, 40@60 per ½-peck; rhubarb, 5@10c per bunch; squashes, 10@15c each; spinach, 10@15c per ½-peck; tomatoes, 15@20c per box; turnips, 40c per ½-peck.

Fruits—Apples, 25@30c per ½-peck; blackberries, 25@30c per qt.; cantaloupes, 15@20c each; huckleberries, 35@40c per qt.; pears, 20@30c per ½-peck; peaches, 15@20c per ½-peck; watermelons, 40@75c each.

PITTSBURGH PRODUCE

—Aug. 4, 1920.

Butter and Cheese—Prints, 60½@61c; tubs, 60@60½c; cooking, 45@48c; Ohio, 55½@56½c. Cheese—Wisconsin Swiss, 58@60c; do, 1-lb. brick, 35@38c; Swiss, 20-lb. block, 39@40c; Phila. cream, doz., $1; longhorns, 35@36c; Limburger, 1-lb., 39c; do, 2-lb., 38c; New York full cream, 33@35c; Roquefort, $1@1.20.

Eggs—Fresh, select, 51@52c; specials, at mark, 48@49c; current receipts, 46@47c; do, candled, 49@50c.

Fruits—Apples, bu., $1.50@2.50; do, crab bu., $3.50@4; pears, Bartlett, box, $4@4.25; huckleberries, crate, $9@9.50; do, basket, $3.50@3.75; blackberries, crate, $7@9; dewberries, crate, $10@12; peaches, crate, $2.50@4.50; do, bushel, $1.25@3.50; do clings, crate, $1@2.

Produce—Potatoes, Eastern Shore, $5.25@5.50; do, Jersey Cobblers, 150-lb. sack, $4.25@4.50; do, No. 2, sack, $1.75@2. Sweet potatoes, hamper, $2.50@2.75; beans, wax and green, hamper, $1@1.25; do, lima, hamper, $3@3.50; do quart, 50@55c; onions, do, h. g. 100-lb. sack, $3.25@3.50; cabbage, h. g., bushel, 75c@$1; lettuce, h. g., box, $1@1.75; do, head, box, $1.25@1.75; turnips, bu., $2.25@2.50; green corn, h. g., bu., $2.50@3.25; garlic, lb., 25@30c; parsley, doz., 50c; radishes, doz., 25@50c; tomatoes, basket, 75c@$1; mushrooms, basket, $1.50@1.75; carrots, new, dozen, 35@40c; beets, new, dozen, 35@40c; celery, bunch, 25@50c; peppers, hamper, $1.50@2; do, barrel $5.

BALTIMORE PRODUCE

—Aug. 14, 1920.

Butter—Creamery, Western separator, extras, 56@57c; do, firsts, 55@56c; do, prints, ½ pound, extras, 58@59c; do, firsts, 56@57c; do, 1 pound, extras, 58@59c; do, firsts, 59@567c; nearby creamery, extras, 48@50c; do firsts, 46@47c; dairy 69c; do, firsts, 56@57c; nearby creamery, prints, Maryland, Penna. and Virginia, extras, 37@38c; do, firsts, 36@37c; store-packed, firsts, 37@38c.

Eggs—Western Maryland, Penna. and nearby firsts, 48c; Eastern Shore, Maryland and Virginia firsts, 48c; Western (Ohio) firsts, 48c; West Virginia, firsts, 46@47c; Southern (North Carolina) firsts, 45@46c.

Live Poultry—Chickens, spring, under 1¼ pounds, lb., 40c; do, 1¼@1½ lbs., lb 42@43c; do, 1¾ and 2 lbs., lb., 45c; do, old roosters, lb., 21c; do, old hens, over 4 lbs., pound, 37c; do, small, pound, 35c; do, white Leghorn hens, pound, 35@36c; do, young white Leghorns, 1½ pounds, pound, 40@42c; do, under 1½ pounds, pound, 38@40c. Ducks, white Pekins, young, lb., 36@38c; do, Puddle, 4 pounds and over, lb., 35c; do, smaller, poor, lb., 28@32c. Pigeons, old, pair, 35@40c; do, young, pair, 35@40c. Guinea Fowl, young, each, 75c.

NEW YORK PRODUCE

—Aug. 16, 1920.

Butter—Steady, receipts, 8400 tubs; creamery, higher than extras, 55½@56¼c; creamery, extras, 92 score, 55@55¼c; creamery firsts, 88 to 91 score, 51@54½c; packing stock, current make No. 1, 43@44c.

Eggs steady; receipts, 12,095 cases; fresh-gathered firsts, 48@52c; state, Pennsylvania and nearby western hennery whites, firsts to extras, 58@70c; state, Pennsylvania and nearby western hennery browns, extras, 60@65c; state, Pennsylvania and nearby gathered browns and mixed colors, first to extras, 48@57c.

Cheese steady; receipts, 3543 boxes; state, whole-milk flats, current make, white and colored, specials, 27½@28½c; do, average run, 25½@26½c; state, whole-milk twins, current make, specials, 26½@27½c; do, average run, 25@26c.

Live and Dressed Poultry steady and unchanged.

Vegetables—Potatoes, bbl., L. I., $3@3.50; Jy., 165-lb. $2.75@3.50. Sweets, bskt., Jersey, 1s, $2.50@3; Jersey, 2s, $1@2; beans, bskt., wax, 25c@$1; green, 25c@$1; beets, nearby, bbl., $2@2.50; carrots, nearby, 100, $1@2; corn, Jersey, baskt., $1@2; Jersey, basket, 50c@$1.50; celery, crate, state, bunch 15@75c; Jersey, bunch, 15@60c; cucumbers, Jersey bskt., 25@$1; Jersey, box, 25@75c; cabbages, bbl. 50@75c; cauliflowers, state, crate, $2@3.50. Eggplants, Jersey, box, 50@65c; Jersey, basket, 60@90c; kale, bbl., nearby, 25@50c; leeks, nearby, 100, $1@3; lima beans, Jy., bskt., $1.50@2.50. Lettuce, State, crate, 50c@$1.25 okra, Jersey, crate, $2@3; onions, Jersey, white, bskt., $1@1.50; yellow, basket, 60@90c; peppers, Jersey, bbl., $1.25@2.25; peas, state bskt., $1@2.25; L. I., bag, 50c@$1.25; Jy., basket, 50c@$1.25; parsley, nearby, 100, 50c@$1; radishes, nearby, 100 bunches, $1@3; romaine, nearby, bbl., 75c@$1.50; scallions, nearby, 100 bunches, 50c@$1; spinach, nearby, bbl., 50c@$1; squash, white, bbl., $1@2; yellow, bbl., $1@2; turnips, white, bbl., $1.50@3; rutabaga, bbl., $1.25@1.75; tomatoes, Up. Jersey, box, 25c@$1.25; So. Jersey, Acme, 25c@$1; Stone, 15@75c; Grant, 10@50c; Jersey, 12-qt. bskt., 10@25c; Jy., carrier, 25c@$1.

Fruits—Apples, bskts., 50c@$2; pears, bskts., $1.50@2.50; peaches, crate, Jy. Carm., $1@2; Hiley, $1.50@2.50; Belles, $1.25@2.25.

YORK PRODUCE MARKETS

—Aug. 14, 1920.

Butter—Country, 60@65c lb.; separator, 70@75c lb.; milk, 14c quart.

Eggs—48@50c per dozen.

Poultry—Hens, 25c lb.; springers, 33c lb.; dressed, $1@2.50 each.

Vegetables—Potatoes, 30@40c ½-peck; $1.50@2.25 per bushel; lettuce, 5@10c head; cabbage, 3@10c head; radishes, 5c bunch; beets, 5c bunch; onions, 5c bunch; 10c box; peas, 15@30c ¼-peck; beans, 8@10c ¼-peck; corn, 20@50c per doz.; hams, slices, 45@80c lb.; whole, 40@45c lb.; lima beans, 20@25c pint; eggplants, 10c each; peppers, 10c ½-dozen; cucumbers, 75c@$1.40 per 100.

Fruit—Apples, 10@40c ½-peck; 5@15c per box; blackberries, 20@25c box; tomatoes, 5@10c; 8@15c ¼-peck; peaches, 10@15c box; plums, 15@25c box; pears, 10c box.

Retail Grain Market—Wheat, $2.75; corn, $2; oats, $1.25; rye, $1.75; bran, $3 per 100 cwt.; middlings, $3.75 cwt.

Wholesale Grain Market—Wheat, $2.45; corn, $1.55; oats, 80c; rye, $1.25; bran, $60 per ton; middlings, $70 per ton.

PHILADELPHIA LIVESTOCK

—Aug. 16, 1920.

Receipts for the week ending Aug. 14, 1920, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Totals or week......	2200	7041	7394
Previons week	2093	8795	7114

Calves—Receipts of calves were 2610 head against 2949 head previous week.

Beef Cattle—Steers and cows were in fair request and steady under moderate offerings. Veal was weak and some kinds were easier, with buyers operating cautiously. Quotations: Steers, good to choice, $14.50@16; fair to good, $13@14.50; common to fair, $11@13; cows, dairy, good to choice, 8½@10c; do, fair to good, 7@8½c; bulls, 7@10½c; calves, extra to choice, $18.50@19; fair to good, $15@16.50; common, $11@13; Tennessee, $15@16; southerns, $6@10.

LIVESTOCK MARKETS

CHICAGO

—Aug. 14, 1920.

Cattle—Receipts, 1500; compared with week ago, good and choice heavyweight steers and yearlings and prime heavies generallly 50c higher; some spots 75c stronger; rough heavy cattle strong to 25c higher; good grassy steers 40c to 50c higher; plain weighty grassers steady; common kinds 25c to 40c higher, good to best she stock and canners 25c higher; others 25c to 50c lower; bulls steady to 25c higher; calves 25c to $1 lower, stockers mostly 50c higher.

Hogs—Receipts, 4000; mostly 10c to 15c higher than yesterday's average; top, $15.90; bulk light and butchers, $15.25@15.80; bulk packing sows, $14.15@14.50; pigs firm; bulk desirable kinds, $14.25@15.

Sheep—Receipts, 2500; practically all direct; compared with week ago, fat lambs, $1@1.50 lower; yearlings, $1.50@2 lower; ewes, 50c to 75c lower; feeding lambs, 25c to 50c higher; feeding sheep and yearlings steady to lower.

NEW YORK

Cattle—Receipts, 740; no trading.

Calves—Receipts, 770; weak; veals, $13@16.50; western calves, $10.50.

Sheep and Lambs—Receipts, 3600; dull, sheep, $7@7.25; culls, $2@3.50; lambs, $9@15.50; culls, $7@8.

Hogs—Receipts, 2420; steady; light to medium weights, $17.50; heavy hogs, $16.50@16.75; pigs, $16.50; roughs, $13.

EAST BUFFALO

Cattle—Receipts, 750, slow.

Calves—Receipts, 240; $1 lower; $0@17.50.

Hogs—Receipts, 2400; pigs, 50c higher; others, 10@15c higher; heavy, $16@16.25; mixed, $16.50@16.75; yorkers, $16.75@16.85; light yorkers, $16@16.50; pigs, $16; roughs, $12.50@13; stags, $8@10.

Sheep and Lambs—Receipts, 600; slow; lambs, 50c lower; lambs, $6@13; yearlings, $6@10; wethers, $8.50@9; ewes, $3@7.75; mixed sheep, $8@8.50.

PHILADELPHIA HAY AND GRAIN

—Aug. 14, 1920.

Baled Hay and Straw—Receipts, 240 tons of hay and 5 cars of straw. Trade slow at unchanged prices. Quotations were as follows: Timothy hay—No. 1, none here; No. 2, $36@37; No. 3, $30@31; sample, $25@29; no grade, $18@24. Clover-mixed hay—Light mixed, $32@35; No 1 mixed, $31@32. Straw—No 1 straight rye, $16@16.50; No. 2 do, $15@15.50; No. 1 tangled rye, $15@15.50; No. 2 do, $14@14.50; No. 1 wheat straw, $12.50@13; No. 2 do, $11.50@12; No. 1 oat straw, $13.50@14; No. 2 do, $12.50@13.

Bran—Dull and weak to sell. Car lots including sacks: Soft winter bran, western, in 100-lb. sacks, per ton, $51@51.50; spring bran, in 100-lb. sacks, per ton, $50@50.50.

Corn—No. 2, yellow, $1.68@1.75.

Wheat—New, No. 2 red winter, $2.70@2.80; No. 2 red winter, garlicky, $2.60@2.70.

Oats—No. 2 white, 97@98c; No. 3, white, 96@97c.

NEW YORK HAY AND GRAIN

—Aug. 16, 1920.

Feed—The market for mill feed was inactive and comparatively heavy. There was a moderate demand for prompt delivery as some of the trade seemed to want to buy ahead of the freight advance, but at best the volume of business was light.

Quotations: City feed bran, $50; middlings, $56, in 100-pound sacks; red dog, $73, nominal, in 100-pound sacks; Western spring bran $48; standard middlings, $56; flour middlings, $68; red dog, $78, nominal, all in 100-pound sacks, 30-day shipment. Oat feed, $37; rye middlings, $54; white hominy feed, $67, all in 100-pound sacks. Cottonseed oil meal, $62@63; linseed oil meal, $64, in 100-pound sacks.

Hay and Straw—The market is steady at 33d street shed and at Bushwick station Brooklyn. At other harbor points there is still some pressure to realize and wide ranges in our quotations are necessary to cover values at the several harbor points. Rye straw firm. Oat and wheat straw dull.

Hay—Large bales, timothy— No. 1, $40@45; No. 2, 34@42; No. 3, 29@36; shipping, $26@30; no grade, $18@25. Clover mixed—Fancy, $34@41; No. 1, 29@34; No. 2, $26@29. Straw—Large bales, No. 1 rye, $20; No. 1 oat, $10@11; No. 1 wheat, $10@11.

PITTSBURGH HAY AND STRAW

—Aug. 14, 1920.

Receipts of hay are reduced to a minimum. In fact the market is bare of hay of every description. Less than a dozen cars arrived on all roads during the beginning of week. Demand is steadily increasing. Old hay is having the call but there have been several inquiries for good dry new hay and this grade could be placed at practically same figures as old. No 1 light clover mixed sells readily but heavy mixed and clover are not wanted. Good soft packing hay can be placed to advantage. The demand being extraordinarily good for this season of year. On the whole market is inviting shipments. Oats straw is wanted eagerly while demand is improving for wheat and rye. There is not much demand for ear corn but a fair demand for oats at present figures. The following prices can be realized: Old No. 1 Timothy, $37@37.50; old standard timothy, $35@36; old No. 2 timothy, $32@33; old No. 3 timothy, $28@30; old No. 1 light clover mixed, $32@33; old No. 1 oat straw, $15.50@16; No. 2 oat straw, $14.50@15; No. 1 wheat straw, $15@15.50; No. 2 wheat straw, $14@14.50; No. 1 rye straw, $15.50@16; No. 2 rye straw, $14.50@15; No. 2 yellow ear corn, $1.69@1.70; No. 2 white oats, 89@90c. All other grades in proportion. Packing hay selling $20@22 per ton.

PHILADELPHIA DAIRY MARKET

—Aug. 14, 1920.

Butter—Receipts, 4390 tubs. The market showed no important change, but as usual on Saturday, there was little or no wholesale trading. Quotations: Fresh, solid-packed creamery, high-scoring goods, 57½@59½c; the latter for jobbing sales; extra, 56½c; do extra firsts, 55½c; firsts, 51@55c; seconds, 47@50c; lower grades, 43@46c; sweet creamery, choice to fancy, 58½@60½c; fair to good, 49@57½c; ladle-packed, as to quality, 44@47c; packing stock, 39@44c; fancy brands of nearby prints were jobbing at 65@67c; good to choice, 57@64c; fair, 54@56c.

Cheese was steadily held but quiet. Quotations: New York, whole milk, current make, fancy, firsts, 27½@28c; common to fair, 24@27c; Longhorns, 26½@27½c; single Daisies, 26½@27½c; jobbing sales of fancy goods, 29@30c.

TOBACCO MARKET

—Aug. 14, 1920.

The opinion of tobacco growers that the present crop if sold under normal conditions will command but a low and often wholly unsatisfactory price seems to be amply supported by a recent report of the Department of Commerce. In this report the total amount of leaf tobacco held by manufacturers and dealers on July 1, 1920, is given at 1,453,000,000 pounds as compared with 1,400,000,000 at the corresponding time last year which it will be seen is a considerable increase. And we also have an estimate from the Department of Agriculture forecasting a substantial increase in this year's production as compared with last.

It is a safe conclusion, therefore, that a decided bearish market situation is probable unless some conclusion of a decisive nature is promptly reached by growers. As applied to Pennsylvania alone it is noted that conditions are comparatively favorable with an acreage of but 93 per cent of last year and a forecasted product of several millions of pounds less. But growers should not conclude that this reduction will automatically influence market valuations to any noticeable extent. A decidedly greater reduction would be required to improve prices and even this would not be far reaching unless the same should be extended to other tobacco growing localities.

The reduced acreage of the Pennsylvania crop it seems may be largely offset by the unusually favorable condition reported from practically all localities. The growing season has been favorable and the crop has progressed rapidly to the extent that much of the Havana product has already been harvested and much broadleaf has been topped and will be ready to cut by the last of the present month. It is noted that in some instances growers have found it necessary to have their women folks assist in the field, a fact which should be sufficient to incite a determination to have at least a fair financial reward.

INTERSTATE MILK PRICES

—Aug. 14, 1920.

Philadelphia milk prices in effect August first are as follows: For three per cent milk, $4.20 per cwt., or basic quantity price per qt. of 9.1c. For 3.5 per cent milk, $4.40 per cwt., or basic quantity price of 9.6c per qt. For four per cent milk, $4.60 per cwt., basic quantity price of 10c per qt. The price for surplus milk will be determined and sent out at the end of the month. When milk is not tested the price f. o. b., Philadelphia is to be 10c per qt.

Farm Products Prices and Prospects

WHO PAYS THE FREIGHT?

In the long run the public pays, but temporarily the freight rate increase upon live stock, grain and other farm products will come out of the farmers' pockets. If it ever finds its way back it will be in imperceptible ways and the farmer will not notice that it has been returned to him. About 5½ cents a bushel will be added, by the rate increase, to the cost of shipping wheat from Chicago to New York or New England points, 5⅝ to 5⅞c in case of corn and 3⅛ to 3⅜ cents on oats. Country elevators will be obliged to have a larger margin to cover the additional cost of shipping to terminals. The live stock increase is about 33⅓ per cent over the country as a whole, and will amount to about $20.00 on the average carload of stock from Iowa points to Chicago. Packers will have to pay heavier haulage charges from slaughter points to places of consumption and will find it easier to take care of their interests by lowering buying prices for stuff on the hoof than by advancing the selling price of meat. Farmers have much at stake in the development of railway systems which are efficient, but the readjustments of prices necessary to place this burden upon the ultimate consumer rather than upon the producer will take place slowly.

MONOPOLISTIC BUYING

We have become so accustomed to thinking of monopolies as inventions which apply merely to selling agencies that monopolistic buying may be overlooked. Practically all our legislation squints at the problem as though it appeared only on one side of the fence. Farmers have often believed that they were encountering monopolistic buying in the stock yards, although proof sufficient to convict has not been available. During the last two or three years the farmer has paid the penalty of monopolistic buying on the part of foreign purchasers of grain and hog products. England centralizes her buying under one commission. A news dispatch the past week stated that England was not buying more grain in our markets in spite of the political developments in Europe because of a gentlemen's agreement between England and France not to compete with each other in our markets. Such an arrangement is not amenable to our laws. There is no protection the government can give its farmer citizens against it. To meet such conditions farmers need an organization of their own, empowered to say what a fair and reasonable price for farm products is. We have the greatest respect for the laws of supply and demand, but artificial conditions prevent these laws from being in full control of price determination from day to day. No one will question the farmers' right to establish agencies to counteract such conditions.

BETTER FEEDING RATIO IN PROSPECT

Altho the prospect is good that the ratio between prices for corn and cattle will be favorable to the feeder this winter, buyers are few. It is not a normal season for heavy purchases since it is fly time and farmers are threshing. Pastures recently have been drying up in spots. But most serious of all is the inability of buyers to get accommodation at banks or through commission houses at least for normal amounts. Last week Eastern Pennsylvania was the best buyer of feeders at Chicago. Many thin cattle, including stocker and feeder steers and stocker heifers are selling at worth-the-money prices.

MORE NEW ZEALAND LAMBS ARRIVE; PRICES DOWN

With dressed lamb prices declining under the influence of a big New Zealand frozen lamb cargo at Boston, and tight money and dry weather keeping feeder buyers away, values upon lambs on the hoof have been at the buyer's mercy. Prices are 50 cents to $1.00 lower, with the greatest discount on lower grades. Natives which are filling eastern markets are said to compare more favorably with westerns than usual since the early spring range was poor. The Northwest is not losing any cars by failing to load them, and feeding stations near Chicago and Missouri River markets are kept full. The alleged range shortage may show up in an abnormally early ending of the western run, but for the present the supply is adequate. Packers sidestep buying for freezing. Mature muttons held steady.

The declines are not stimulating much feeder buying. If anything the feeling of uncertainty and the difficulty of getting funds are accentuated. Only a few have gone to Iowa corn fields. Breeding ewe demand is fairly good, but is confined to Tennessee and Kentucky.

STRONG DEMAND FOR HIGH CLASS HORSES

Trade in horses has revived earlier than expected. Loggers are being purchased for Maine and Canadian points and the South is bidding briskly for southern chunks. Demand for good drafters exists, although eastern buyers are rather inactive. At all markets there is a big spread in price between the best and the lower grades. Probably no place in the livestock market does condition and finish bring a greater premium than in the horse market. The Chicago Union Stock Yards Company sold one gelding for $1100.00, a team for $1800.00 and has refused $4,000.00 for the international grand champion gelding Blucher and his mate.

WOOL TRADE NOT YET REVIVED

Discussions of the wool trade are still mere opinions and prices are conjectural. Manufacturers and dealers harp upon the big supply string while growers insist that the conditions are artificial. Thus far the growers have gotten the worst of it, as the buying side has avoided carrying charges and the tightness of money has kept the advances made to growers at a low level. Recent reports indicate a slight increase in buying and more willingness to quote prices, but the consignments are accumulating in the hands of the selling agencies. Retailers' shelves are being emptied and it is believed that new purchases which will start the mills must be made in a month or two. Figures on June consumption of raw wool indicate a decrease of over 25 per cent from the average of the preceding six months. The sudden break in the wool market in May was thought to be an effort to check the pooling movement. Thus far its effect seems to have been of the opposite kind.

Boston announces nominal quotations as follows:

Ohio and Pennsylvania fleeces: Delaine unwashed, 70c; fine unwashed, 60@62c; half-blood combing, 68@70c; ⅜-blood combing, 50@53c.

Michigan and New York fleeces—Fine unwashed, 58@60c; delaine unwashed, 67@68c; half-blood unwashed, 67@68c; ⅜-blood unwashed, 50@52c.

Wisconsin, Missouri, and average New England—Half-blood, 60@63c; ⅜-blood, 48@50c; ¼-blood, 40@43c.

Kentucky, West Virginia, and similar—⅜-blood unwashed, 53@55c; quarter blood unwashed, 48@50c.

FOREIGN WHEAT DEMAND

An alleged "gentlemen's agreement" keeps England from competing with continental buyers in our wheat market, at least they have seldom been in the market together recently. Argentine exports were prohibited officially on August 12, but presumably some of the wheat already sold for export will be taken out. India maintains her embargo on exports and the Australian reserve and crop prospect will justify stopping clearances from that country before long. Both the French and Italian import wheat requirements for the coming year have been greatly enlarged because of recent periods of bad weather. French Colonial possessions have also lost their wheat crop by drouth. Canada and the United States have a big surplus, about 350,000,000 bu., so that any shortage in the world's supply will not be felt for some months. Germany and Scandinavian countries have been big buyers of rye recently.

BUTTER DECLINES

About 2,000 casks of Danish butter and 8,000 boxes of Argentine butter arrived at New York during the week. This additional supply, aided by the tightness of credit which restricts buying for storage, caused butter prices to ease off about ½ to 1½ cents on 92 score. Still more foreign butter competition is expected this fall and the cheapness of lard and other fats is an adverse influence in the trade. Fine butter is scarce and consumptive demand for it excellent, so that the trade has been obliged to resort to undergrade stock. The decline has carried prices to the point hat the domestic is as cheap as Danish. Toward the week's close the market recovered and a steadier tone is expected.

SUMMER DULLNESS IN CHEESE TRADE

Lower country cheese markets last week did not stimulate trade at distributing points out of the dullness which is characteristic of the month of August. All markets reported the bulk of trading confined principally to small lots. However, dealers generally have not pressed sales urgently, feeling they would rather hold than to make sacrifices. Prices were affected only to a small degree, markets declining ¼ to ½c on all styles. All markets are unsettled at present, principally because of the money situation and at best do not rule better than steady. New York states that while western cheese is in greater demand than usual, New York goods bring a slight premium over western made cheese. Business on white cheese has not been large, but such kinds continue to bring the usual premium over colored.

Receipts, compared with the preceding week, in the four markets increased, but a decrease is noted at Philadelphia and Chicago.

However, there is an ample supply of practically all grades on all markets to supply the demand with the exception of flats at Philadelphia where a scarcity of this style is reported. Cold storage holdings show but a small increase at the four markets.

BIG DECREASES IN EGGS AND POULTRY

Total receipts of cases of eggs at the four cities, Chicago, New York, Boston and Philadelphia since January 1 are 9,640,598 against 11,291,262 cases during the same period of 1919. Poultry receipts at the same points for this period amount to 84,566,342 lbs., against 109,574,462 lbs. a year ago.

N. J. TO PUT COUNTY BOARDS OF AGRICULTURE ON PAID MEMBERSHIP BASIS

A number of farmers and their wives met at the Agricultural Building at New Brunswick, N. J., Monday, August 9, 1920, and formulated plans for the establishment of a State office for the N. J. Council of County Boards of Agriculture which is analogous in New Jersey to the State Federation of Farm Bureaus in other states.

It was decided to have minimum dues in the various county boards of agriculture of $2.50 a year for the following purposes: 50c a year for each member for the American Farm Bureau Federation, $1 for each member for the maintenance of a state office and $1.00 from each member to defray the cost of a campaign to secure a membership of 8,000 which is considered necessary to maintain the organization for one year. Each county organization is given the privilege of fixing dues in its organization above the minimum of $2.50, and all money collected in this manner is to be retained in the county for local use or for promoting its own projects.

After little discussion it was decided to admit women to membership on the same basis and with the same privileges as men.

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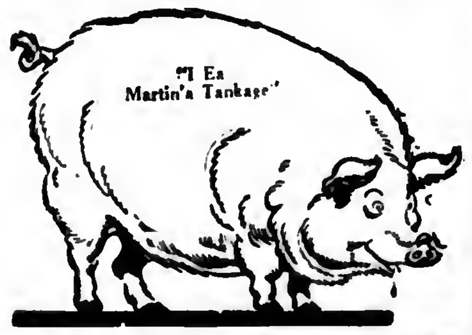

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LIVE STOCK

BUY PROTEIN FEEDS

By W. H. Tomhave

Practically every livestock farmer will need a supply of concentrate protein feed to supplement farm feed during the winter. The kind of such feed to buy will depend upon the class of livestock kept on the place. If hogs are kept, digester tankage is probably the most satisfactory by-product to purchase, as it seems to meet the requirements of swine of all ages better than any other protein feed available. If skim milk can be supplied in abundance, there is little need for purchasing tankage as this by-product makes a very satisfactory substitute for tankage. Fish meal is also a very desirable substitute for tankage, but this product is made in limited quantities and cannot be secured in sufficient amount to depend upon. The time will come when this product will be used on a more extensive scale as a swine feed.

Where only a few hogs are fed and the garbage from the kitchen is used, the need for a protein supplement is not as great as where corn and other farm feeds alone are fed. To attempt fattening swine on corn alone without the use of a protein supplement is an expensive venture because of the greater amount of corn required to make one pound of gain. In a number of trials conducted to compare the use of corn alone with corn and skim milk or buttermilk for fattening pigs, it was found that it took 492 pounds of corn when fed alone, and 302 pounds of corn when supplemented with 800 pounds of skim milk or buttermilk. In a number of other trials where corn alone and corn and tankage were compared in fattening hogs for market, it was found that it required 545 pounds of corn to produce one hundred pounds of gain when fed alone. When tankage or meat meal was supplied it required 380 pounds of corn and 40 pounds of tankage to produce 100 pounds of gain. In other words there was a saving of 165 pounds of corn when 40 pounds of digester tankage was supplied.

These trials not only show that corn can be saved when a protein feed is supplied, but the rate of gain for the pigs receiving the protein feed gained 1.74 pounds per head per day while the corn alone group gained 1.15 pounds per head daily. In other words, it is important that pigs gain at a rapid rate when in the fattening lot in order to get them ready for market in the shortest period of time.

For cattle and sheep, cottonseed or oil meal are the most satisfactory protein feeds to feed in combination with farm feed. Cattle feeders should not attempt to carry on an economical and profitable feeding business without the use of a properly balanced ration. Many farm herds of breeding cattle and flocks of sheep would winter in better shape and could be carried thru the winter more economically if fed a balanced ration during the winter. Feeding a well balanced ration not only keeps the livestock in better condition but the fertilizer value of the manure from such livestock is higher than when the protein supplement is lacking in the feed.

The most desirable time to purchase protein feed is, as a rule, during the summer months. The price is usually lower at that time because the demand for these feeds is not as great as during the winter months. It is very desirable to purchase such feed in carload lots as they can be secured at a more reasonable price than when purchased in small quantities. Several farmers in a community can join in purchasing a carload and in that way take advantage of the lower price that usually prevails during the summer months, which is especially true of cottonseed meal and oil meal.

CENSUS FIGURES SHOW MULE GAINS

Preliminary census figures, subject to correction, are being released by the U. S. Census Bureau. Data from twenty-eight counties in Tennessee and from scattered counties in Kentucky, North Carolina, Florida and Georgia have been received. These figures show a trend in these states to decrease horses and increase mules. Horses in the twenty-eight counties in Tennessee total 75,490—a loss of 5001 since 1910. Mules number 87,672, a gain of 21,124 over 1910 figures, making a net gain of 16,123 in both horses and mules. The scattered counties in other states referred to, show substantially the same condition in an increase of mules, but a decrease in horses.

The figures do not present a direct comparison, for the 1920 census was taken in January, and the 1910 census in April, when a good many foals existed and were enumerated. They do disclose, however, a decrease in horses owned in the South, which means a decrease in breeding in that part of the U. S., and they furnish eloquent testimony of the high regard southern farmers have for mules.

There is good reason for this. The mule is the only fool proof motive power unit. They can go out singly, or in pairs, fours or sixes, and after a full days' work, return home all right, whether the driver does or not. In these days of irresponsible labor, that is a big factor. Then, too, a driver cannot overheat a mule. When he gets too warm he slows up to a gait befitting the weather, and not even the fluent vocabulary of an ex-cavalryman will persuade him to greater speed. Brought in at night, it is sufficient to pull off the harness and turn this long-eared believer in "safety first" into a big dusty barn lot with food and water. He will roll until he is groomed to his own satisfaction, and will not drink nor eat till cooled down enough to make it safe to do so. No matter how much grain is accessible, he will stop eating when he has enough.

Facts

Most hens will lay if they are allowed to; many successes with chickens are made in spite of the owner rather than on account of him.

* * *

Burlap sacks represent real money these days. These with small holes or rips are well worth mending

THE COLD STORAGE SITUATION IN PENNSYLVANIA

The cold storage business in the United States has enlarged in the past few years to such an extent that it is now recognized as almost a primary, and not a secondary industry. The number of cold storages in Pennsylvania is gradually increasing. The business has proven to be not only a profitable one, but a necessity whereby enormous quantities of foodstuffs can be held for a period of months until they are needed, without apparent injury to their quality.

Cold storage has proven a lifesaver in the case of perishable fruits, producing an equilibrium between supply and demand. When the supply exceeds the demand, perishables can be held over a short time until the market has adjusted itself.

Apples form a big item in the storage business in Pennsylvania, both in barreled stock and boxes. The barrels are of regulation size holding three bushels. The quantity of apples held in Pennsylvania cold storages during the crop season of 1919-1920 was 30 percent more than held during the corresponding season of 1918-1919. The figures are for thousands of bushels boxes.

	1918	1919	1920
January	111	87	122
February	73	43	76
March	39	19	41
April	22	11	20
May	6	4	5
June	1	1	1
July	0	0	0
August	0	0	...
September	0	0	...
October	0	25	...
November	115	160	...
December	129	162	...

Boxed apples, packed in standard one-bushel boxes, are almost entirely of Northwestern pack. Those brought into Pennsylvania are held in cold storages until wanted. During the crop season of 1919-1920 there were 37 percent more bushels in storage than during the crop season of 1918-1919. The figures are of thousands of bushels boxes.

	1918	1919	1920
January	220	152	238
February	163	144	165
March	106	83	117
April	73	64	60
May	51	20	17
June	13	8	11
July	4	0	0
August	0	0	...
September	0	0	...
October	0	18	...
November	52	128	...
December	91	244	...

Dairy products, butter and all kinds of cheese, are found in great quantities in storage at all times of the year. The quantity of one product, creamery butter, ws 27 percent more during the fiscal year ending June, 1920, than that in storage during the year ending June, 1919. Thousands of pounds of butter and cheese:

	1918	1919	1920
January	6,140	3,251	2,745
February	3,557	2,186	1,692
March	2,491	1,365	1,201
April	1,660	421	668
May	973	382	229
June	1,154	1,990	789
July	3,670	6,443	5,192
August	6,659	8,148	....
September	7,485	7,906	....
October	6,805	7,110	....
November	7,027	5,900	....
December	[illegible]	4,554	....

Lee Union-Alls

The most popular work garment in America

THE original one-piece suit and the standard of quality in work clothing. Do not be deceived by imitations and "just-as-good's."

Remember There Is Only ONE Union-Alls—the LEE

Dept 471 B.
The H. D. Lee Mercantile Co.
Kansas City, Mo. South Bend, Ind.
Kansas City, Kas. Trenton, N. J.
Minneapolis, Minn. St. Louis, Mo.

Keep your hogs free from lice

Keep their sleeping quarters, the feeding grounds, pure and healthful. Use the sprinkling can. Add four tablespoonfuls of Dr. Hess Dip and Disinfectant to each gallon of water. Sprinkle the animal body to kill the lice, the sleeping quarters and feeding grounds to destroy the disease germs. Or provide a wallow, to which add about one gallon D and D to every 70 gallons of water. Disinfect the barns, the poultry house.

Also use it about the home, in the sick room, sink and cesspools, to establish better health conditions.

DR. HESS & CLARK Ashland, Ohio

DR. HESS DIP and DISINFECTANT

WANTED. 2 cases of eggs weekly, direct from farm. Also pigeons, 35c a pair. Fred H. Mueller, 853-57 West Side Avenue, Jersey City, N. J.

HELP WANTED

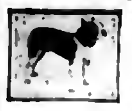
Good mill hand, first-class butter and creamery man; farm hands, milkers for De Laval milking machines. Good positions for the right kind of men on one of the largest and foremost commercial farms in New York State. Good wages with fine board and lodging to single men, and good houses to married men. Address WHEATFIELD FARMS, R. F. D. 14, LaSalle, N. Y.

Wanted Experienced Bookkeeper for Farm Assistant

Single man preferred, as good board and room can be furnished. Should be a good penman, capable of operating typewriter and willing to make himself generally useful. State salary and give references, with experience in first letter.
Address LAUREL LOCKS FARMS, Pottstown, Pa.

WANTED: Men owning rig or auto to sell well-known line lubricating oils, house paints, barn paints and roofing materials direct to farmers. Commissions paid weekly. Special Monthly Bonus paid on sales. Old reliable concern selling farm trade for years—financially responsible and standing back of every material sold. Write us today for our complete sales proposition. Central Petroleum Co., Cleveland, Ohio.

Miscellaneous



For sale, the big type Flemish Giants, also high class New Zealand Reds; and R. R. Belgian Hares; Guinea Pigs, Ferrets; Pigeons; White Mice and Rats; Thoroughbred dogs, puppies a specialty; Blooded hogs. Write for prices. 10c for booklet.
MOHAWK RABBITRY, Dep't. O. Indianapolis, Ind.

REGISTERED O. I. C.'S

All ages. Bargains in bred gilts and boars of all ages. We are overstocked and the price is right.
ELM GROVE STOCK FARM,
Cortland, N. Y.

FOR SALE—THREE GUERNSEY

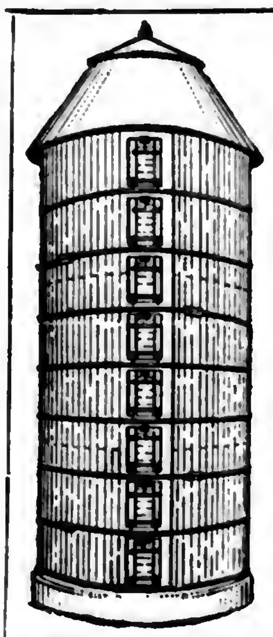
Bull Calves, sired by Langwater Musette's Dunnde King, out of dams on test; one out of grand daughter of King of the May. $100 up. A. J. Fell, Lansdale Pa

TIFFANY'S SUPERIOR DUCKS

Mammoth Pekin, Giant Rouen, and Indian Runner Ducks and Drakes $2.50 each and up
Aldham Poultry Farm, R 37, Phoenixville, Pa.

FOR SALE. 4 Reg. LINCOLN BUCKS

Wool-producing breed. For information address
T. C. BAKER COCHRANVILLE, PA



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Prompt Shipment

AGENTS WANTED

West Branch Silo Co.
WILLIAMSPORT, PA.

VIRGINIA FARMS

You can become happy and independent farming in Virginia. You can grow profitably alfalfa and all grasses, corn, fruits, grains, beef and dairy cattle. Virginia boasts the finest apple-growing section in the world. Prices very reasonable but advancing. We welcome you. Write now for illustrated handbook and maps.

G. W. KOINER
State Commissioner of Agriculture, Richmond, Va.

$1500 Cash Secures 250-Acre Equipped Farm

Everything goes for less than value of buildings to settle estate quickly; near Pennsylvania R. R. town; machine worked fields, spring watered pasture, wood, apple orchard; 7-room house, [illegible] view; water, telephone, maple shade, new barn, [illegible] spring water; quick buyer gets 7 cows, wagons, machinery, part growing crops; everything only [illegible]; easy terms. Details page 30 Strout's Big Illustrated Catalog Farm Bargains, 33 States. Copy free. STROUT FARM AGENCY, 1122 BE, Land Title Bldg., Philadelphia, Pa.

FARMS Finger Lake region. New York state's best. $50 and up.
WILBUR & AVERY. KING FERRY, N. Y.

Are You Getting All the Milk She Can Produce?

As long as a cow gives down a fairly good flow of milk you may think she is producing to her full capacity. But is she? A cow is a wonderful milk-making machine, but she must be properly fed to produce a good profit for her owner.

International Special Dairy Feed

Makes Good Business Cows

International Special Dairy Feed is made of high grade materials, each one of which contains certain elements necessary to the general good body condition of the animal. These ingredients are scientifically mixed in just the right proportions to produce the desired results—the most milk, the best condition and longest life.

Feed With Summer Pasture

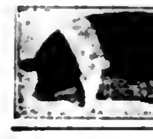
Grass stimulates the milk flow but has no sound basis for building the body and maintaining milk flows at capacity indefinitely. Feed International Special Dairy feed with summer pasture and see how big milk flows can be maintained all year round.

Every cow in your herd must earn her board and a profit for you or go to "beef." Start feeding International Special Dairy Feed now and give the poorest cow in the herd a chance to make good. Start with a trial ton *at once*. Order from your dealer today. If no International dealer is near you, write us and we will see that you are supplied promptly.

INTERNATIONAL SUGAR FEED CO.
MINNEAPOLIS, MINN.
Mills at Minneapolis and Memphis
Live Agents Wanted

Swine

PATHFINDER'S RIPPER
By PATHFINDER
dam by Great Sensation, heads our Duroc herd. Line bred Pathfinder offering of 40 head at Public Auction Dec. 2nd. Get a catalog.
SLATY RIDGE FARM, Palmyra, Pa. Box 3.



Hampshires Bred gilts for fall farrow. Their first litter usually pays for them. Free circular. Guernsey cattle. LOCUST LAWN FARM, Bird-in-Hand, Box 2, Lancaster, Pa.

FASHION HERD OF POLAND CHINAS
10 young sows, bred to Fashion Giant, to farrow September litters. Spring and service boars. For catalog and price-list address
C. S. EPPLEY, ZANESVILLE, OHIO

EDGEWOOD HAMPSHIRES
Everything sold. Booking orders for gilts bred for fall farrow, and pigs for Pig Club work only.
DEPEW HEAD, MARION, OHIO

Try Reg. Big Type Spotted Poland Chinas. The hog of the hour. Write for prices. Satisfaction guaranteed or money refunded
G. CLYDE THOMPSON, Chambersburg, Pa., R. 10.

FOWLER'S PURE BRED HAMPSHIRES
Will please you.
Best and largest herd in East.
THE FOWLER FARMS, MACUNGIE, PA.

O. I. C. PIGS 8 weeks old, registered free, to be delivered in September. L. H. Silver's strain. Satisfaction guaranteed.
THE OAKS DAIRY FARM, WYALUSING, PA.

TARRYMOOR BERKSHIRES
Quality Growthiness Prolificacy
We guarantee satisfaction.
Robt. E. Atkinson, Wrightstown, Pa. Bell Phone.

REG. O. I. C'S, all ages. Open and bred gilts at prices to move them.
Black Diamond Minorca Farm, Mt. Bethel, Pa.

Big Type Poland Chinas All ages. Write for prices.
KEYSOR & CLELAND, GREENWICH, OHIO

Chester Whites and HAMPSHIRE SHEEP. Write your wants. We can please you. TWIN BROOK FARM, Newville, Pa.

Chester Whites Boars and Sow Pigs. Bred Sows. Collie dogs.
ARCADIA FARM, BOX D, BALLY, PA.

CHESTER WHITES Hardy, prolific, well bred.
L. D. GARRIGUES, THORNTON, PA.

Hampshire Hogs, bred sows, and 8 and 10 weeks old pigs.
A. H. FUNSTON, WILLOW HILL, PA.

LANCASTER COUNTY HAMPSHIRE SWINE
Choice breeding stock, all ages. The best of breeding and out-standing individuality. Trios of spring pigs not akin. Thirty-six prominent Eastern herds to select from. We ship only the very best quality registered stock. Prices right and satisfaction guaranteed. State your wants when inquiring.
The Lancaster County Hampshire Swine Breeders Co-operative Association. Address—
S. R. ZUG, Secretary, LAMPETER, PA.

HAMPSHIRES
All ages. Strong and vigorous stock. When you buy you want the best, don't you? Then write us. Inspection invited. ROSS B. WITMER, LAMPETER, PA. Member Lanc. Hampshire Breeders' Co-operative Association.

REGISTERED DUROC-JERSEY PIGS
$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs.
C. W. Ellis, Jr., Maple Lawn Farm, Cortland, N. Y.

REG. DUROCS. Several Sows and service boars for sale. Also good spring boars. Good type and breeding. Northumberland Co. Duroc-Jersey Breeders' Assn., J. M. Fry, Corresponding Secy., Sunbury, Pa.

Large Type Reg. Berkshires of all ages for sale. Select a breeder from a large litter. Pay when you see stock. No cash in advance.
DAVID WIANT, HUNTINGTON MILLS, PA.

BRED SOWS AND GILTS. I have some very fine Berkshire sows and gilts bred to farrow Sept. 1st. Also a few choice open gilts. Anselm B. Kirsch, Highland Stock Farm, Nicktown, Pa.

Reg. Berskshires with size and quality; long bodies, good in back and legs. Spring pigs and bred sows.
NEARBY STOCK FARM, POTTSGROVE, PA.

Special Sale REGISTERED DUROC SOWS bred for Summer farrow, $65.00 each, registered and express paid.
BELROSE FARMS, RICHFORD, N. Y.

O. I. C. Males 2 to 4 months old. Satisfaction guaranteed.
BRUBAKER BROS., Star R, Cocolamus, Pa.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, Center Valley, Pa.

REG. BIG TYPE POLAND CHINA PIGS. Hampshire Down Sheep, all from the best blood and priced right. C. E. SECHLER, MARKLETON, PA.

REG. O. I. C. PIGS. Aug. 1st farrow. Quality guaranteed. Two gilts, 7 months old.
L. D. LAUSHEY, SMICKETOWN, PA.

CHESTER WHITE PIGS.—A fine lot now ready to ship, either singly or in pairs.
R. L. MIINCE, Canonsburg, Pa.

BIG BLACK BERKSHIRES
Write for prices or come and see the fine bred gilts and young sows ready for breeding in the Fall that we are offering at bargain prices. The bred gilts are part of our foundation herd. For reference—our satisfied customers.
CRESTMONT FARM, SUNBURY, PA.

CUMBERLAND CO., N. J.

Weather ideal for August, cool and some rain. Thirteen car loads of potatoes shipped from Shiloh Crossing last week. Tomato crop good, boat loads being shipped. William Stuart is shipping okre at $4.00 a hamper. Frank Githens is shipping green tomatoes to Florida. There has been a wonderful crop of alsike and sweet clover for honey making. Eggs 65c per dozen. Peaches are being shipped from the Shoemaker orchard.—C. J. S.

LEBANON CO., PA.

Warm seasonable weather has pushed all growing crops along with the exception of tobacco. The nights are almost too cold for that crop. Wheat is all harvested and in many cases threshed. It yields well, being very heavy in the ears. Most of the oats are also harvested. The crop was exceptionally good in this section. Threshers are getting 9c per bushel for threshing wheat, a 50 per cent increase over last year. Wages during haying and harvesting were $4 per day with board. Some fall plowing has been done and practically all the rest of the farmers here are spreading manure and commencing plowing. Corn is looking fine and indications point to a bumper crop of the cereal.—Leonard F. Strickler.

TIOGA CO., N. Y.

A series of thunderstorms, the most terrific known in many years, swept over Tioga County, New York on July 21, 22, 23 and 24. The lightning was unprecedented for hours. The roar of thunder, with its continuous clashing, was deafening and the rain fell in torrents. In fact, cloudbursts is more rightly the name for some of the rains. Rivulets and small streams were raging torrents. Small streams that never had been knee deep were washed several feet deep for long stretches. Bridges were taken out, roads completely obliterated, so that new road beds will have to be made on one stretch of road in the southern part of the town of Candor, and at an estimated cost of $8,000 or $10,000. Many horses and cows were killed by lightning, many barns were struck and burned, many telephones burned out and many buildings, houses, barns and silos were struck and not burned. A tornado struck the farm of C. N. Codner below Owego, demolishing two barns, tearing the summer kitchen from the house and smashing it and partially unroofing the house, and uprooted 50 apple trees, leaving but one tree in the orchard standing. His damage is estimated at $10,000 or over.—M. I. C. A.

Agrigraphs

Plenty of clean drinking water and lots of shade will keep many a valuable hog from getting sick.

• • •

Remember that the tractor has a lot of fall plowing and belt work to do yet this year. Maybe a little looking over would be a good thing.

• • •

Hens lay when fat—not too fat—and stop when thin. Look for fat on the pelvic bone; if you find it, the hen is fat, if you don't the hen is thin.

• • •

Rotate the sheep pasture in the summer; don't allow lambs to run on old pasture; put them on green forage if you have it and new pasture is not available.

Facts in BLACK & WHITE

To Get Profits Get a Holstein Bull

It doesn't cost much to make a start, but every year it will cost more. Some of the most successful and prominent Holstein men started with only a few purebred animals in connection with a number of good grades, gradually weeding out the grades and replacing them with purebreds.

Grade up your herd with a purebred Holstein sire. Then when you're satisfied that you're on the right track, you'll feel like getting a few cows. Any good Holstein does the work of two ordinary cows.

But read all the Holstein facts in our free booklets. Write for them today.

THE HOLSTEIN-FRIESIAN ASSOCIATION
218 Hudson Street
Brattleboro, Vermont

Donegal Farms Duroc Sale
August 28, 1920
45 head including 20 bred gilts, 4 bred sows, 3 yearling boars, 2 fall boars (one by Pathfinder) 16 spring gilts and boars of Colonel Orion Pathfinder and Cherry King breeding.
Send for Catalog
Raymond B. Zook
Amos S. Weidman
R. No. 1 Mt. Joy, Pa.

POLLED HOLSTEINS
registered in the Herd Books of the Holstein Friesian Association of America. Herd sire out world's record senior four-year-old,
KEYSTONE BEAUTY PLUM JOHANNA No. 181646
At 4-10-20, 365 days—27787.5 milk: (4.02%) 1294.7 butter
At 3-3-23, 365 days—22496.6 milk: (3.94%) 1108.8 butter
2 years under full age—48284.1 milk; 2403.5 butter. The youngest cow in the world to have two consecutive records averaging over 24.000 lbs. of 4% milk in a year.
Bull calves $100.00 and up. GEORGE E. STEVENSON & SONS, Clarks Summit, Pa.

BULL CALVES at BARGAIN PRICES
We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred, healthy bulls from a clean, Tuberculin Tested Herd at reasonable prices. King of the May—Dolly Dimple—Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees.
WAWA DAIRY FARMS, 22 S. 32nd St., Phila., Pa.

STEVENS' HOLSTEIN FARM
OF CORTLAND, N. Y.
King Korndyke Sadie Vale Jr., No. 20391, two nearest dams averaging 36 pounds of butter in 7 days heads my herd. Butter records from 17 pounds two-year-olds to 34 pounds at full age. Also high grade Holstein calves, either sex, $20.00 each. Write your wants. PAUL H. STEVENS, Prop.

SUNNYBROOK GUERNSEYS
40 head, free of tuberculosis, bull calves for sale.
EDWIN S. MAULE, COATESVILLE, PA.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale.
MILLARD E. BASEHOAR, Littlestown, Pa.

JERSEY BULL CALF, 9 months old, bred at the top. Pedigree furnished on application. Anselm B. Kirsch, Highland Stock Farm, Nicktown, Pa.

MILKING SHORTHORNS, sons of Glenside Royal Stamp, grandsons of General Clay; also a few females. C. M. KENNEDY & SONS, ULSTER, PA.

Reg. Holstein Bulls from calves to serviceable age. Herd tuberculin tested under Federal and State supervision. BONNYMEADS Farms, Harrisburg, Pa. R. 1

REG. SHORTHORNS FOR SALE. Cows with calves; heifers, bred and open; also some choice young bulls. Farmers' prices. R. H. LYLE, CADIZ, OHIO.

CALF BORN JULY 6th. Guernsey bull. Dam A. R. 7 May Rose crosses, at $75. Locust Lawn Farm, Bird-in-Hand, Box P, Lanc. Co., Pa.

Reg. Holstein Bull Calves, from officially tested dams and a 30-lb. sire. Write for prices, pictures and pedigrees. Walter M. CRUTTENDEN, Forty Fort, Pa.

Ayrshire Bull Calves From high record A. R. Dams.
ROBERT TEMPLETON & SON, ULSTER, PA.

Swine

REG LARGE ENGLISH YORKSHIRES. Short nose, good length, prolific and quick-growing type. Fall pigs for sale. J. Homer Reams, Luthersburg, Pa.

CHESTER WHITES For Sale. Service boars and young pigs, all ages.
ALLAN R. MORTON, ASHVILLE, N. Y.

Nelson's Berkshires 4 months old pigs $25. With size and quality; guard'd to please. W. D. Nelson, Jr., Marshallton, Del.

Veterinary

Conducted by W. C. Fair, V. S.

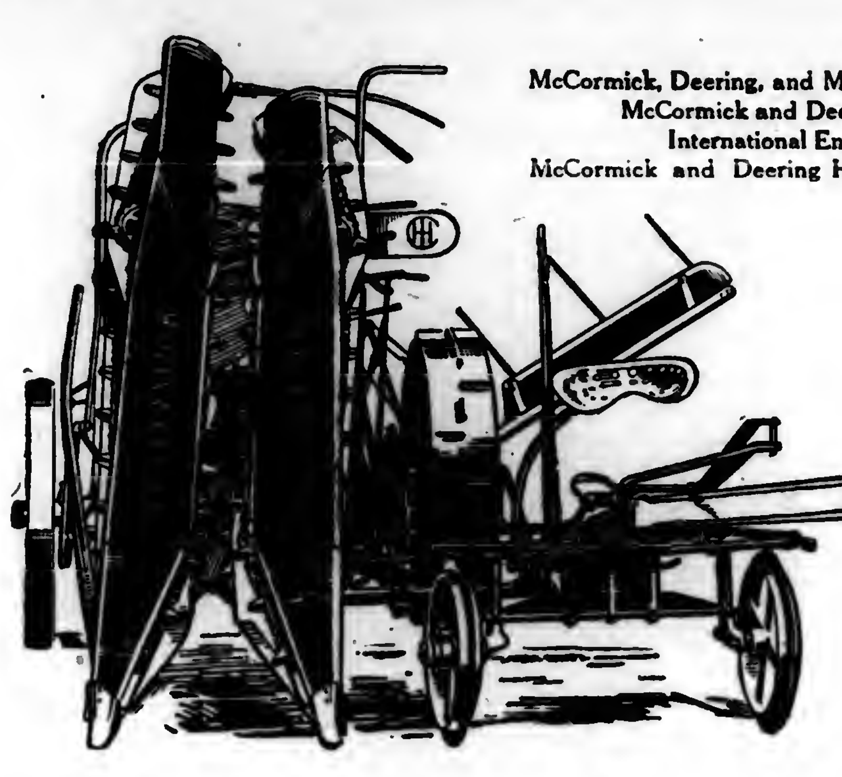
Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Injured Neck.—Have a 3-year-old colt that is troubled with stiffness of the neck. His shoulder is also affected. He may have been injured in stable by another horse. At first he improved, since he has gradually grown worse, but not until I turned him in pasture. My veterinary tells me the muscles under shoulder blade are injured and the case is hopeless. Stands at times holding head very high, neck seems to be drawn out of shape, being bowed and thinner than normal. He is in some pain. A. B. W., Stoneboro, Pa. A long rest is the best remedy for your colt, but if you can locate the trouble apply equal parts tincture of iodine and camphorated oil daily.

Asthma—Heaves—Wind-broken.—I have a mare ten years old that has what our local veterinary calls asthma and he believes her incurable; however, he recommends dieting. She has periods of severe coughing. A. W. D., Perkasie, Pa.—Feed no clover or dusty, musty, dry fodder, not much bulky food and wet all her feed. Grain and grass is the best summer feed for her. Give half-ounce doses of Fowler's Solution in feed or in drinking water three times a day. If she is a ravenous eater, stint her allowance. Your veterinarian is right—she should be dieted.

Sore Shoulder.—Last fall while my horse was doing hard work his shoulder got sore from friction. The harnessmaker removed some of the padding and I applied iodoform and tannic acid, which healed wound. This sore developed quite a pocket which ran upwards. The sore has opened more than once. I worked him today, now shoulder is again sore. The collar seems to fit. I have tried all sorts of pads to keep collar off sore. The harnessmaker thought he could fit breast-collar for him to work in. S. & H., Glen Moore, N. Y. When the shoulder was first treated the inner wall of abscess should have been curetted and swabed with tincture of iodine. It is possible that some cutting should now be done on shoulder, before a permanent recovery will take place. Dissolve ¼ lb. acetate of lead in one gallon of cold water, then apply to sore shoulder 4 or 5 times a day; also, continue using the same dusting powder you mention. It is possible to work him in breast collar.

Poisoned Cow.—I have a Holstein cow that formerly gave 25 qts. of milk daily, especially when she came fresh. This year she came fresh in April, and the most she has given this season is ten quarts. She carried her calf six days over time and must have eaten the afterbirth, for I failed to find it in box stall where she calved. Have been told that she may soon go dry. G. K., Salona, Pa. Doubtless she has eaten the afterbirth and failed to expell it with the feces and it of course has slowly decomposed in her stomach, during which time it has acted as a poison. Give her a teaspoonful of borate of soda at a dose 3 times a day. If her bowels do not act freely give her an occasional dose of Epsom salts. She should be well fed.



McCormick, Deering, and Milwaukee Corn Binders.
McCormick and Deering Corn Pickers.
International Ensilage Cutters.
McCormick and Deering Huskers and Shredders.

King Corn

and a glimpse into Corn Machine History

AUTUMN will bring into the markets of the world some three billion bushels of American corn. A great army of corn harvesting machines is already mobilizing.

It is the purpose of this page to remind corn growers of the great part played by this Company, and by the builders of McCormick and Deering, in the development of modern corn machines.

Cyrus McCormick invented the reaper and lead the way from ancient hand-harvest to efficient binder-harvest. There is no news in that; every school child knows the historical fact.

Less familiar but just as inspiring is corn machine history. Here too, forty years ago, the builders of this Company were pioneering. Out of their hands in these two score years have come such efficient corn machines as the binder, the picker, the husker-shredder; and the credit for today's high standards belongs to the International builders. Now, corn has come from its lowly state to be crowned *King* Corn, and the tiny crop of 1880 has grown to a three-billion-bushel yield.

The careful corn grower will understand that *the steady accumulation of Harvester experience is important for him.* Whatever the need—for corn binder, picker, ensilage cutter, husker-shredder, sheller—International dealers the nation over may be depended on for corn machines whose practical utility is everywhere acknowledged.

INTERNATIONAL HARVESTER COMPANY
OF AMERICA
INCORPORATED
CHICAGO USA

Poultry

Look! BABY CHICKS $14 a 100 up!
By insured parcel post, postage paid. 40 breeds chicks, 4 breeds ducks. Get August and September chicks for February and March layers. Catalog free, stamps appreciated.
NABOB HATCHERIES, GAMBIER, OHIO.

EGGS Etc.—Small consignments from producers in your territory bring very attractive prices NOW. Prompt returns always. Refer to Dun or Bradstreet. Ship us your next case. ZENITH BUTTER & EGG CO., 170 Duane St., New York, N. Y.

LIVE POULTRY
Hay and all farm products wanted. Daily demand at good prices. GIBBS & BRO., 325 North Front St., Philadelphia, Pa. Estd. in 1844.

Crystal Spring Poultry Farm
Offers at least 500 extra fine cockerels, from 16 to 24 weeks old; also B. P. Rocks, R. I. Reds, W. Leghorns and Bl. Minorcas, at $2 and $2.50 ea. Satisfaction guaranteed. M. E. Basehoar, Littlestown, Pa.

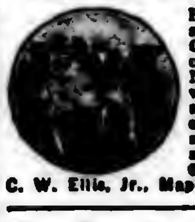
Sicilian Buttercups
Farm range, prize winning Buttercups. Investigate this wonderful variety. Write for circular.
MAPLE LAWN FARMS, CORTLAND, N. Y.

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
SELBY PRODUCE CO., PHILADELPHIA

SPECIAL Barred Rock Chix, $15 per 100; Reds, $17; White and Brown Leghorns, $13 per 100; Anconas, $20. Each week, prepaid, alive.
E. R. HUMMER & CO., Dept. T, Frenchtown, N. J.

GET PIELL'S BLACK LEGHORN COCKERELS
Fine yellow-legged birds, $1.50 and $2.50.
RUSSELL F. PIELL, PITTSTOWN, N. J.

MAPLE LAWN HOLSTEINS



High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.
C. W. Ellis, Jr., Maple Lawn Farms, Cortland, N. Y.

Nine Reg. Guernsey Bulls, 1 to 10 mo. old. Sires, Langwater Foremost, Glen Gable Friendship, 2 sired by son of Glenwood's Buttercup, 769 lbs. fat at 3 years. H. B. SHENK, ELVERSON, PA.

HOLSTEINS
Registered & Grades

150 reg. cattle, 20 reg. bulls, 100 high grades, a carload of any age that you may want. Holstein heifer calves $20 each express paid in lots of 5. Over 3,000 satisfied customers will send list in your states for reference of square dealing at SPOT FARM.
J. C. Reagan, Tully, N. Y.

HOLSTEIN FRIESIAN HEIFER AND BULL CALVES
Purebred registered and high-grade. Price $20 up. Splendid individuals and breeding. Write us your requirements. BROWNCROFT FARMS, McGraw, N. Y.

MID-SUMMER SALE OF AYRSHIRES
A fine selection of heifer calves, bred heifers, and young cows in this offering. Excellent opportunity to found or build up your herd with animals from the best breeding backed by large records. Prices reasonable—Tuberculin tested, no reactors.
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The Outlook for Livestock Feeders

Conditions in Livestock and Money Markets of Interest to Cattle Feeders

By Sanders Sosland

"We have the feed, but cannot get cattle or lambs to stock up our feedlots, owing to the attitude of bankers and live stock loan agencies."

Complaints similar to the foregoing are coming from hundreds of feeders of live stock in all parts of the United States. The complaints are loudest in the Middle West. Commission houses at Kansas City, Chicago, South Omaha and other stock yards in the Middle West are greatly disappointed over the serious restrictions put on the sale of feeding cattle and feeding lambs by the abnormal money situation in the United States. Unless there is a change in the demand, it is probable that live stock feeding operations will be reduced in the face of increased production of corn, hay, oats, cottonseed, linseed and other feedstuffs.

At the Kansas City stock yards, the largest distributor of stocker and feeder cattle in the world, and other yards in the Middle West, Pennsylvania has lately been one of the most liberal purchasers of thin stock to put into feedlots. Pennsylvania farmers, the commission houses explain, are more independent of bankers in financing their feeding operations than the feeders of live stock in other States, especially in the sections where individuals handle large numbers on borrowed funds. In every other state there are, happily, farmers with sufficient means to purchase cattle or sheep in moderate numbers for feeding purposes without the aid of bankers. But it is well for these farmers and feeders to understand just what the influence of the abnormal money markets of the United States is bringing about in the trade in stocker and feeder cattle and feeding lambs. The situation is very advantageous to those with money to pay for cattle and sheep to go into feedlots and indications are that this class of buyers will be able to dictate prices on their purchases.

Iowa, Illinois, Ohio, Missouri, Kansas, Oklahoma and Colorado are among the states of the country which purchase each summer and fall many thousands of feeding cattle and feeding lambs for finishing purposes. Professional feeders in these states borrow immense sums of money for the purchase of the thin stock from bankers and from cattle and sheep loan agencies. They are a powerful force in determining prices on thin live stock, for they buy in large numbers. It is noticeable now, however, that this class of buyers is inactive, being desirous of feeding even in the face of losses the past year, but finding money markets without the funds they must borrow to continue in the business.

Stocker and feeder cattle are already at the lowest level in three years. Feeding lambs are low, too. The prices, in fact, appear to be at a bargain level, especially in comparison with a year ago. There are few if any indications of advances and a greater likelihood of recessions. **In the first week in August, for example, stocker cattle declined as much as $1.50 per hundredweight at Kansas City, a sensational break, and many good grades sold below $6. Just what level will prevail on feeding lambs cannot be forecast except by a true prophet, but supplies are available now at $12 per hundredweight in the Middle West, a decline of about $3 from the quotations at this time a year ago.**

Owing to the restrictions put on the large operators, many of whom make purchase of feed cattle and feeding lambs on ranges direct from the producers, there are indications that the stock yards will receive relatively larger supplies. This is particularly true in case of feeding lambs. One operator at Denver, Colorado, for example, handles as many as 1,000,000 lambs in the course of a summer on contracts which he distributes direct to feeders. But the men with whom this operator deals are experiencing difficulty in arranging for credit accommodations.

At this time last year great numbers of feeding lambs had already been contracted on the ranges of the flockmasters of the West for delivery to various feedlots. The flockmasters and the feeders have not been able to make many contracts this season, so the next three or four months will see increased selling on markets.

The position of money markets is also stimulating the movement of thin cattle and sheep from ranges of Texas, New Mexico, Colorado, Wyoming, Montana and other portions of the West to stock yards. This is explained by the fact that the banks, being heavily loaned up, desire to improve their reserves and want some of the sheep and cattle raisers to pay off at least a portion of the loans on their flocks and herds. If the bankers were comfortably situated with respect to loans and deposits, it is probable that there would be a strong tendency to reduce sales from ranges. First, the condition of ranges through the West is excellent. In recent years Texas and the Southwest reduced their holdings of cattle and sheep on account of drouth. At this time a year ago, Montana, Wyoming and Idaho were suffering seriously from lack of moisture and feed, and they shipped thousands of cattle and sheep to markets prematurely. These states also suffered heavy mortality the past winter. Thus the West is not over-stocked. But the West, as well as other sections, reports money as tight.

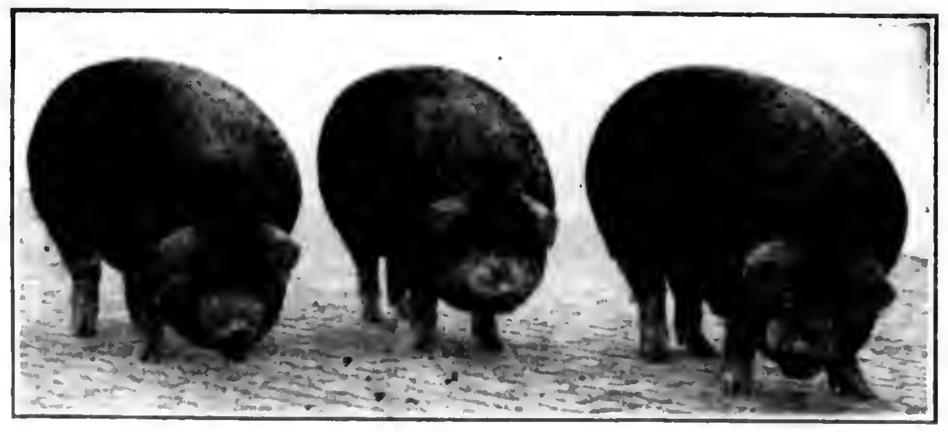
No study of cattle and sheep market supply prospects in the West would be complete without some consideration of the depression in the trade in wool. Millions of dollars which the West expected to be flowing into its banks from the sale of the 1920 wool clip have not yet arrived. Loans of flockmasters which should have been liquidated by this time with new wool money have been increased instead, for there is depression in the market for that staple and it is difficult to sell at sharp declines in prices. This adds to the pressure on banks and will probably force larger marketing of thin lambs and sheep. The wool trade will also indirectly influence larger marketings of cattle.

The annual movement of grass cattle and sheep from the range states is largest between August and November. Shipments are already heavy. It is probable, however, that the movement will extend over a longer period this season, owing to the shortage of cars and motive power. In other words, instead of big daily runs or big runs for a few weeks, the arrivals will be considerable almost throughout the season.

Stockmen forced to make sales and farmers planning purchases cannot conduct their operations with full light on the problems confronting them without a general understanding of the reasons for tight money. Banks are not restricting loans to cattle and sheep feeders alone, nor are their loan rates only high to the live stock industry. Money is universally tight. During the past year rising prices and booming conditions in business in cities forced bank loans upward on a rapid scale. For months the Federal Reserve banks have been seeking to reduce their loans to their member banks, having advanced their discount rates to 7 per cent in the East and enforcing a progressive system of discount rates in the Southwest. These rates were around 5 per cent a year ago. But the new crop year has started without any material improvement in money markets. Banks therefore face the necessity of meeting new business demands with no great surplus of loanable funds. Even packers such as Armour and Swift are paying more than 8 per cent for loans. The great banks of New York, Boston and Philadelphia, which buy large amounts of cattle and sheep loans from loan companies in the West, are so loaned up that they are assisting only to a small degree in this financing. The sale of the great wheat crop in the Middle West would bring much money for the purchase of feeding cattle and feeding lambs, but the shortage of cars is limiting that movement. It is improbable that any important improvement in money markets will be witnessed during the period of the largest sales of stocker and feeder cattle and feeding lambs.

In the industrial districts of the East, it is reported that factories are less active, having reduced operations on account of the influence of the money market. With less industrial activity, will consumers be able to pay the same prices for beef and mutton which prevailed the past year, or even the prices which are now quoted? I do not believe labor will be so well employed in the coming year as in the past twelve months. This will affect the demand for fed cattle and fed lambs.

With stock cows around $5.50 for good grades, with light stock steers around $6, with many feeding steers at less than $9, with feeding lambs at less than $12 at Kansas City and with other markets on a parity, and with feed considerably cheaper, it is a certainty that the cost of putting fed cattle and fed lambs on markets in coming months will be reduced. But the economic readjustments which tight money is stimulating make it necessary that costs be reduced. If tight money prevailed in the live stock industry alone, the advantage possessed by the farmer and feeder with independent financial resources would be more important than at present in the business of producing mutton and beef.



How to Treat Ivy Poisoning

In the early stages of ivy poisoning remedies having a fatty or oily base, such as ointments, should not be used, as the grease or oil tends to dissolve and spread the poison. Instead simple remedies such as local applications of solutions of cooking soda or of Epsom salt, one or two heaping teaspoons to a cup of water. Fluid extract of grindelia, diluted with 4 to 8 parts of water, should often be used.

Solutions of this kind may be applied with light bandages or clean cloths, which should be kept moist and should be changed and discarded frequently to avoid infection. During the night, or when moist applications cannot be used, the poisoned surfaces should be carefully cleaned and dried and left exposed to the air rather than tightly bandaged. In the later stage, after the toxic material has exhausted itself, zinc-oxide ointment and similar mild antiseptic and astringents hasten healing.

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Timber Depletion and the Farm

How Farmers May Aid in Reforestation and How they will Benefit By It

By W.B. Greeley, Chief Forest Service

U. S. Dept. Agriculture

Who in this country uses the most timber? And who owns the most forest land? The answer to both questions is—the farmer. Both going and coming the farmer is vitally interested in timber.

Whenever the farmer builds a barn or silo or buys an axe handle the supply and the price of timber affect his pocketbook. On the other hand, whether material suitable for his farm implements or buildings is to be had when he wants it may depend upon how he manages his woodland. And his interest in timber does not stop there; it extends to the question of how convenient and desirable a place his farm shall be on which to live and to raise his family. Is he going to be able to keep his house and barns and fences in good repair?

Timber Properly Cared For Pays the Farmer

The estimates of a large number of county agents show that the average farm, new and old, requires about 2,000 board feet of lumber year for repairs or new buildings. Can he get up-to-date tools and equipment at reasonable prices to work his land? After he has raised his crops are they to be shipped in proper containers to the best markets or sacrificed because containers cannot be had or cost too much? All these depend in no small degree on the supply and price of timber.

Agriculture is the greatest wood-using industry of the United States. Forty-six per cent of all the wood which this country consumes annually is used on its farms. The yearly lumber bill for farm structures and improvements aggregates 6¾ billion board feet! Farm requirements for boxes, barrels and other articles manufactured from wood call for nearly 4 billion board feet additional each year. Add to these requirements the 80 million cords of fuel wood consumed annually by farmers and over a billion cubic feet of fencing material and it is easily seen that farmers have a greater interest in an assured supply of timber at reasonable prices than any other class of American citizens.

High Timber Prices Make Farming Difficult

The availability of cheap lumber of good quality has been a tremendous aid in the rapid development of American farms. During the eighties, the Middle Western farmer obtained for $15 to $20 per thousand board feet white pine lumber from the Lake States of a quality now scarcely to be found. In February, 1920, he paid from $70 to $75 per thousand feet for framing and sheathing lumber and up to $150 per thousand feet for the better grades of finish, and all of it came from the South or the far West.

The farmer in common with the other users of lumber is not merely experiencing a wave of high prices. Lumber, indeed, has had its full share of price inflation. This is due not only to general causes but also to the sudden release of pent-up demands for building and construction at a time when lumber stocks were low and the industry could not rapidly increase its production. But behind these temporary conditions is a more permanent and more serious cause of high lumber prices. The steady depletion of the great forest regions nearest the bulk of our agriculture and populations has gone so far that 61 per cent of the timber now in the United States is west of the Great Plains; that lumber is being hauled longer and longer distances, paying higher freight charges and becoming more and more subject to the delays arising from car shortages and congestion of transportation; and that competition between different lumber manufacturing regions for the supply of many of our large rural and other markets, which has been the great leveler of lumber prices, is fast disappearing.

Farms Capable of Self-Support in Timber Needs

The farmer is the most independent of any one in the Nation when it comes to food. He might be equally independent in the matter of timber. He owns, in the aggregate, more forest land than the lumber barons and all other private owners combined. Farm woodlots, or woodlands, reach the enormous total of 191 million acres and comprise two-fifths of the forest area of the United States. East of the Mississippi River they cover 153 million acres, or 45 per cent of the timber in this region. And this quantity includes over half of our remaining hardwoods.

This Woodland Has Furnished Wood, Timber and Lumber For Many Years

It has been estimated roughly that the annual growth of timber possible on the farm woodlands of the United States is equal to 8½ billion board feet of material suitable for lumber, staves, boxes, etc., and 114 million cords of fuel wood. In other words, the farm woodlands themselves could produce more than the entire quantity of fuel now consumed by the farmers and 81 per cent of the present quantity of lumber, boxes, and barrels now used on the farms, if their growing capacity were fully utilized. From the information to be had, which is far from complete, it does not seem probable that the farm woodlands are growing today more than one-third of the timber which they might produce if they were kept at work at full capacity.

National Forest Policy

The farmers of the United States are not only the largest consumers of forest products; they are the most permanent users of wood. However other industries may shift or change, the great areas of agricultural land remain as the most basic of our national resources. Not only must the fertility of our farms be maintained; their homes, the improvements necessary for their efficient operation, the containers required to ship their products—these requirements of permanent and efficient agriculture must be provided. American agriculture cannot thrive if wood is priced as an imported luxury. There is no more immediate or more vital need for a national poilcy of reforestation than the need for assuring a cheap and abundant supply of timber for our farms.

Make the Farm Woodlot a Permanent Asset

Far too generally, the farm woodlot is the result of chance. Its size, the material it contains, its value to the farm, such as it is, have come about haphazard. The direct contribution which the farm owner can make to solving our timber problem is to determine what parts of this land are suited to wood rather than other crops and to develop these portions of his land for the production of wood crops with the same foresight and the same conception of permanence as his orchard or his wheat field.

In some other regions, particularly New England, farm woodlots are extending through the version of poor land, hill pastures, and the like to forest. Such regions perhaps afford the best opportunity for the development of the woodlot as a permanent and valuable part of the farm. Many far-sighted farmers, indeed, are aiding natural reforestation by planting poor or waste lands. Not only can these woodlots produce fuel, poles and fencing needed on the farm itself, but they readily grow commercial crops of timebr, in relatively short periods, for such products as pulp wood, box lumber, telephone poles, and railway ties. The farm woodlots now contain half of our hardwood timber. It takes but little care and foresight to keep these woodlots stocked with species of timber that will yield valuable products and whose harvesting, little by little, will add appreciably to the income of the farmer. Many a woodlot, indeed, will serve its owner as a bank in which he may, by a little thought and labor in odd hours, accumulate material whose total quantity and value will some day afford a pleasant surprise. The farmer's part in national reforestation is thus to make the woodlot a permanent asset of the farm.

Some Valuable Wood for Special Uses Comes From the Farm

The Farmer's Business Problem

Knowledge of Labor, Capital and their Business Necessary to Secure a Just Compensation

Dr. Frank App

N. J. Experiment Station

The agricultural business of the United States represents approximately $80,000,000,000 capital. The Nation has passed thru an era of prosperity and high prices fostered by the war. Such periods are always short lived and leave an unhealthy condition for recovery, which are usually long lived. The past month has been a period of chaotic prices for the farmers' products. It is a striking illustration of what we should expect to follow in the years to come unless we are able to meet modern business conditions with present day business methods.

Price Making Forces

There are three dominating price making forces, the first of which is cost of production, the second, supply and demand, and the third, strategic considerations, or manipulation. The first of these, cost of production, influence prices when it is taken for a long term of years. The price from day to day is only remotely influenced by cost of production. The same is likewise true of supply and demand, tho not to such a marked extent. Supply and demand in the long run makes the prices but it does not necessarily make the prices from day to day. Strategy and manipulation is the one undesirable influence which is tampering the prices such as we just witnessed during the past month. When cabbage is sold by the farmer from 75 cents to $1.00 a barrel while the consumer paid 25 cents a head; when tomatoes are sold at 60 cents a basket while the consumer paid as much as 25 cents a pound; when the farmer sold beans from 50 to 75 cents a basket and the consumer paid 15 cents a quart, when the same beans could not be sold for any more than the cost of picking; when onions had so little value to the farmer that they were plowed until while the consumer still paid $8 to $10 a hamper, when many of our perishables had a spread of from 100 to 800 per cent between the price the farmer received and the price the consumer paid, it is quite evident that prices have been materially influenced by strategy and manipulation.

What Can the Farmer Do?

There is but one thing left for the farmer to do in times such as this, namely, to follow the same method of organization, and practice, the same business methods in a business-like way as labor united and capital united. This does not mean that they should practice sabotage in the same heartless way as labor and capital have done in the past, otherwise the society as a whole would be imperiled. However, during the past the sabotage practiced by labor and capital has been chiefly borne by the farmer. When the farmer organizes and adopts the same methods as labor and capital, then labor and capital will be forced to come to an agreement with farmers on production and prices for farm products.

To protect himself, the farmer will need to know what is a fair price. This must be obtained by knowing his cost of production, prices for a long terms of years, foreign demands, foreign exchange, world production, all of which must enter into the making of a fair price. In addition to this the farmer will need to use psychology in placing his cause before the public so that it will be accepted. The labor man has no objection to the farmers receiving cost of production. Capital dare make no objection. If the farmer's cause is properly put before the public, they will have their support and sympathy. The former labor unions met with the sympathy of the public so long as they kept within reasonable limits.

Production Plans

The farm, community, state and Nation are all inseparately linked together in the huge business of food production. They individually and collectively suffer from over and under production, high and low prices and unwise propaganda. Any movement which can steady and better regulate production, will be highly beneficial to both the farmer and consumer. Excessive high prices tend to over production which brings about low prices and followed by under production. During the period of over production, the farmer suffers while the consumer benefits. During the period of under production, the farmer gains and the consumer suffers. However, continued over and under production will destroy the industry and affect both the consumer and producer unfavorably. A series of poor crop years are usually followed by financial depression whereas a series of good crop years are followed by national prosperity. Last year a high price of onions increased the acerage one-third in New Jersey. It also increased it in some other states. The increased acreage with the assistance of the weather has produced a crop larger than the consumer's normal needs.

The potato crop this year is forecasted for 387,000,000 bushels, about a peck more for each individual than our 5-year average production. Will the consumer eat an additional peck at the price of $2.00 or more a bushel? New Jersey has 308,200 bearing apple trees and 257,000 non-bearing or four-fifths as many non-bearing as bearing. What shall be done with these apples when they come into the market? Was the market under-supplied in the past, have other states gone out of the fruit business sufficiently to absorb our increase or must the horticulturists find new apple markets? If they increase the sale of fruit what will it replace? The ordinary man needs from 3,000 to 4,000 calories of food a day, shall he obtain more of this in the form of apples than he has in the past; what shall he eat less of?

Thus it is evident that a clear constructed program is quite essential in the production of food stuffs. This program can be handled only through a strong farmers' organization composed of local state and Federal representatives such as that which has recently been organized by the American Farm Bureau Federation.

The farmer must have ample information pertaining to his entire business. He must also have information pertaining to capital and labor and their business. The business man has studied the production of the farmer and has used it to his advantage. But the farmers individually and as an organized body must know more about their own business, the business of the individual farmer as well as the community, state or Nation if they are to stand up and receive their just compensation in the future.

Wheat Field on Bradford County, Pa., Farm
Part on Left had Lime and Fertilizer. Part at Right had Neither.

—"Social as well as economic opportunities" are what Theodore Roosevelt suggested as a means of bringing back to the farm "ambitious native born young men and women who now tend away from it."

Draining Land as a Community Project

Power Trenching Machines make Drainage Easy and Profitable

Earl W. Gage

Chautauqua Co., New York

Farmers of Hall, Ontario County, New York, organized a co-operative farm drainage company in order that they might construct trenches on their farms and convert waste land into productive fields. The expense of the large trenching machines is too great for an individual farmer, and thus by five farmers combining, they were able to own a machine. Hand labor is not obtainable and too expensive where available.

At the organization meeting it was decided that the only satisfactory way to get the drainage work done was to form a small company and purchase a trenching machine to be operated in the community. The committee immediately purchased a modern machine. In this same community, in 1835, John Johnston, laid the first tile drain in the United States, and many of his methods are still followed, such as using small tile, three or four inches, for laterals and close spacing of laterals.

The Seneca Power Ditching Company, composed of five farmer-members, each having an equal share in the machine, commenced operations. As each farmer had wet land in need of drainage, the idea was mutual. Each member was given his share of the responsibility in the work, the president being in charge of labor on the machine; the secretary, in charge of repairs; the treasurer assistant to the secretary; schedule man to schedule farms and measure work; viewer, inspect new projects and supply general information to new clients. Altho the men desired to drain properly their own farms, they also had in mind a larger service, that of eventually supplying the means of draining farms of the community owned by farmers outside their membership.

The machine selected is shown in the illustration. This will excavate a trench 15 inches wide and 5½ feet deep, being operated by a 25-horsepower gasoline motor of four cylinders. Earth is discharged on both sides of the trench by use of a chute, in the shape of an inverted V, placed inside the cutting wheel, under the point of discharge from the buckets. The members prefer this method, since it makes back filling easier, evenly dividing the supply of dirt on either side of the trench. As against the common method of delivering earth to one side only.

The company does not undertake any part of the tile laying. The charge for work is within the reach of farmers, being about 20 per cent above actual cost, which is hoped to care for the maintenance of the machine, and this is certainly a reasonable figure. The limit of work is 1,000 rods per farmer per year, and since most of the farm drainage systems are small, the farmer can complete his drainage at the first attempt, if he wishes.

Farmers of Warren County, Pa., formed a co-operative drainage company, and altho their success has not been so marked, yet they are certain to achieve much good. Their difficulty seems to have been in selection of a machine inadequate for their rocky land, resulting in many breakdowns. The most important item in drainage is to secure a machine adapted to the type of soil to be handled, powerful enough to overcome difficulties of the community.

Possibly the boldest attempt at redeeming farm lands from waste has been demonstrated in New York State. The Food Supply Commission, a wartime agency, in 1917, purchased three large traction trenching machines; in 1918, ten additional machines were purchased, the College of Agriculture also securing two machines. The state commissions spent about $50,000 on these machines. In 1918 the machines worked on 150 farmes, cut about 40,000 rods of trench, which is estimated to benefit 12,529 acres of land.

Greater work was accomplished in 1919, due to better co-operation on the part of county Farm Bureau organizations, while the demand in 1920 far exceeds the capacity of the machines. Trench drainage has become a popular improvement because of the demonstrations given in the past three seasons.

These machines were placed with the County Farm Bureaus, which made contracts for the season, agreeing to cut 5,000 rods of ditch, paying the State a rental of 10 cents per rod for every lineal rod of trench cut. Not more than one machine was placed in a county, and each county put its machine in proper repair at the end of the season. The commission made a standard price for trenching at the opening of each season.

Laying Tile and Filling Ditch After Trenching Machine

The farmers, in turn, made contracts in writing with their Farm Bureaus for the trenches they wished cut. They agreed that the finished work should be left as near to grade as the operator could manipulate the machine, remove fast stones, true up the bottom of the ditch to grade where necessary, and lay the tile; haul repair parts, gasoline, and supplies needed.

The 1919 scale of prices gives an idea of the expense to the farmer for trench construction, the prices being based on the lineal rod ditch, 15 inches wide, of various depths:

Depth.	Per Rod
2 feet 6 inches or less	$0.55
2 feet 6 inches to 3 feet	.65
3 feet to 3 feet 6 inches	.80
3 feet 6 inches to 4 feet	1.00
4 feet to 4 feet 6 inches	1.25
4 feet 6 inches to 5 feet	1.50

Trenching Machine Used to Cut Ditches

These prices are based on actual cost plus a rental of 10 cents per rod for all depths. These machines are being sold to such county Farm Bureau organizations as wish to purchase them.

The machine-excavated trench varies from 11½ to 15 inches wide, and some of the machines can cut as deep as 5½ feet. They are equipped with a grading device which allows the machine to cut a completely graded trench at the first cut, provided there are no stones or roots which obstruct the passage of the machine. In soft, wet, mucky loam a rock as large as a man's head can often be easily removed, while in a hard, dry clay soil, a stone as large as one's fist may necessitate raising the cutting wheel and finishing the ditch to grade by hand. Large green roots were cut with an ax, and stumps on the ditch line were split by an explosive or burned out.

Experience of the New York State Commission show that the cost of 4-inch tile cost about 8 cents a foot, or about $75 an acre. This was where laterals were spaced from 50 to 60 feet apart. Altho this may seem expensive, the increased production, linked with the increased value of the land makes it profitable.

"The value of tile underdrainage on naturally wet farm lands has long been appreciated," advises John R. Haswell, senior drainage engineer, Bureau of Public Roads. "In localities of cheap land the wet areas are left out of the scheme of cultivation, but as the region develops and values rise, interest in drainage becomes stronger. Owing to the rise in land values the time comes when naturally well-drained farm land costs more than the cost of wet land plus the cost of the drainage and improvements. Under these circumstances the drainage of large tracts is profitable.

"Another phase of the subject is presented by the relatively small areas of low, wet land on individual farms. Here the cost of drainage is usually compensated by the increased crop during the first few years after the drains are installed. The increased value of the farm, due to the removal of some unsightly wet spots is often more than the outlay for the drainage construction."

MILLION NEW CARS ADD TO ROAD WEAR

That the present interest in the construction of new highways should not divert attention from properly maintaining highways already improved is a point to emphasize many times in recent months, particularly in view of the enormous increase in motor vehicle traffic which is taking place. The Bureau of Public Roads recently completed a compilation of statistics from all the States of the Union showing that there were a total of 7,565,446 registered motor cars (including motorcycles and trucks) in the United States in 1919. This is an increase of 23 per cent, or 1,418,829 motor cars over 1918. Such figures indicate that the country's highways are being used far more than in the past, and in consequence added attention must be given to the repair problem. The increase in the number of cars for 1919 over 1918 represents about 10 per cent more cars than the total number registered in the entire United States for 1913.

Additional use of roads and streets has, of course, been accompanied by additional revenue paid to State and local governments in the form of license fees, which in nearly all States are devoted to highway needs. The registration and license fees for automobiles, trucks, and motorcycles in use in 1919 totaled $64,697,255.58—an increase of 20 per cent over 1918. The total revenues for New York and Pennsylvania the past year were about double the revenues received for all motor vehicle registrations and licenses in the entire United States in 1912.

Certain of the States, notably Maryland, have experienced difficulty in securing road-building materials owing to labor shortage, etc.

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PHILADELPHIA, PA., AUGUST 28, 1920
VOLUME 48 NUMBER 9

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Boost Your Fairs

EVERY FARMER should take more than a casual or critical interest in his county fair. They should be looked upon as more than an opportunity for a day's outing. They afford a chance to bring together for public observation the best that the county can produce and in this way help to advertise the county in general and agriculture in particular. The average farmer does not fully appreciate the real interest the town dweller has in a display of the products of the farm. We have seen times when the exhibition booths and buildings devoted to animals and food products were crowded with town people, all eager to know more about the different articles on exhibition. Again, the fair offers an opportunity for the progressive farmer to see and compare different breeds and varieties with his own so that he may adopt what is evidently better than what he has. Of course, there are always those who never take anything to a fair but who always have something at home that is superior to anything on exhibition. We have no words of advice to waste upon this class. They are hopeless, and usually a joke in their communities and laughing stock at the fair.

Mutual Fire Insurance

THE THIRTEENTH annual session of the state organization of the mutual fire insurance companies of Pennsylvania was held at Harrisburg last week. This organization grew out of an appreciation of the need for cooperation for mutual benefit. The mutual companies being of local origin and without a common understanding or plan naturally had many different and some conflicting rules and methods of operation. This federation, or rather association, is an effort to study the methods of each and gradually to compromise differences so that they will do business upon a more nearly common plan. Progress has been made but the addresses and discussions at the meeting showed that there is much yet to be done to bring the mutual companies to as nearly a uniform method as exists among stock companies.

The plan of a state meeting for mutual benefit is one to be commended for all local organizations and the tendency of other organizations to organize state associations is to be commended. The strongest and most helpful organizations are local in character and work, but it is necessary to have a state organization of all locals of similar nature in order to render best service. The officers and other attendants at the meeting referred to were generally men who had given years of thought and attention, mostly without adequate compensation, to the subject of mutual protection against loss by fire, and everyone would benefit by this opportunity to compare and discuss subjects of mutual interest.

Monument to an Apple

THRU THE ENTERPRISE of the Pennsylvania Horticultural Society and the generosity of Mr. J. C. Schmidt a suitable marker was dedicated in the field in which the York Imperial Apple originated. The marker is a monument made from native stone and contains a bronze tablet with suitable legend. It stands in the corner of a field on Springwood Farms, now owned by Mr. Schmidt, and is located on the York-Baltimore turnpike, two miles south of the city of York. Further description will be published later.

The thoughtless may smile at the novelty of erecting a memorial to an apple, yet what is more worthy to be commemorated than the discovery of something that has added to the health, wealth, happiness and food supply of the human family. For more than a hundred years the York Imperial apple has been a lesson in dependability, as Dr. Fletcher characterizes it. This apple is one of the most generally grown varieties in its clime and is popular above others in many foreign lands. This is probably due to its good export qualities. The production of this apple has brought wealth and what money can buy to hundreds of growers and furnished fruit to millions of people after other apples were out of season. Surely, this chance seedling, and the man who recognized it and propagated it—Jonathan Jessup,—are worthy of our appreciation and this mark of public esteem.

Our Markets Service

PENNSYLVANIA FARMER has always endeavored to give its readers the very best market reports possible. We have received many flattering comments upon our success in this line. In addition to our regular market page, we began two years ago the publication of a page headed, "Farm Products, Prices and Prospects." On this page we endeavor to give the most authorative information obtainable on the general, conditions of crops, the markets in other sections, the world's supply and other factors which will indicate to the thinking farmer what the prospects are at the present as well as for the future. We are glad to announce that we have secured the services of a set of trained men who give their entire time to the study of markets and general conditions and who will give us weekly information for this page. We feel sure that our readers will appreciate the value of a service of this kind.

Another feature which we know is highly appreciated is the monthly letter on the feed market by Mr. Sosland. Mr. Sosland lives in the country's feed market center and has spent years in reporting this trade. In his letters readers will find a review of the conditions, prices, supply and demand, and be better able with this information to decide whether large feed supplies should be purchased at a given time, or whether prices are likely to be lower at a later date.

We are firmly convinced that the modern farmer is more interested in the business side of farming than most farm papers realize, and that his chief need is for information on the economics of his business rather than on methods of production. While we shall continue to give the best obtainable on the latter line, we propose to make the business side of farming a feature so strong and so reliable that the up-to-date farmer will continue to recognize Pennsylvania Farmer as the leader among farm papers. Next week we shall have a most important announcement to make.

Production and Distribution

A VISIT to Dock Street or other wholesale market in Philadelphia at this season of the year housekeeping arrangements and methods do not are inefficient, but city people. He who runs thru these market centers and sees the conjestion of produce may read of the efficiency of farmers. He will also see in the market baskets, push carts, baby carriages, wheel barrows, etc., which householders bring to these markets in times of gluts to get the advantage of low prices, evidences of the woeful inefficiency of the distributing system of the cities. As this is written, the wholesale markets are piled high with the very best products. Other quantities are left in the fields. Prices have slumped, in many cases below the cost of production, yet the distributors for the city are buying their usual small quantities, taking the goods out thru the city to their little two by-four stores, in their little dumpy delivery rigs, and retailing at the same old prices. In other words, no provision is made by the city or its produce dealers to handle the products of the farm in the flush seasons. No adequate provision is made to store the surplus for later use. Modern housekeeping arrangements and methods to not allow the exercise of even a squirrel's intelligence in making provision for the season when things do not grow.

Not only is the system of distribution within the city inadequate, but the transportation of the country as a whole has again fallen down and is not able to transport the country's products from the producing centers to the consuming centers. Everywhere and under all circumstances we have seen the farmer able to "deliver the goods," f. o. b. at least, but in almost every instance we have seen the failure of those whose duty it is to distribute, buy and store them so that they might be used or conserved. Because of this failure and the consequent loss to farmers and the privation of consumers, it is evident that farmers must add to their work of production the direction and control of distribution. That is the weakest point in our economic system; yet, in spite of this, other classes persist in giving the farmer advice as to how to run his business and to criticise him without regard to truth or justice.

Our Washington Letter

At the Bureau of Markets I find little encouragement in the wool market situation. Reports to the Bureau indicate that few sales are being made. So many woolen mills are closed down, owing to cancellation of orders for goods, that there is practically no demand from the mills for wool. A market specialist who has just returned from South Dakota says buyers in that state are offering 16 cents a pound for wool, and are picking up small lots here and there from growers who are obliged to sell. In Montana the big wool growers are holding their wool for higher prices and many small growers are pooling their clips. Wool pooling associations in Iowa, South Dakota and Minnesota are consigning their wool to the National Wool warehouse in Chicago, where it is being held for a more favorable market. Michigan wool growers, with a combined clip of 4,000,000 pounds, are assembling their wool in pools and storing it in Lansing warehouses, where it is graded and prepared for market. In Ohio country buyers are offering 20 to 25 cents. About 1,500,000 pounds of wool is being held in storage at the Growers warehouse in Columbus. Idaho wool growers have assembled 1,750,000 pounds of wool in pools to be sold on a co-operative basis. The latest market report says a little better feeling exists thruout the interior regarding the wool market situation. a little higher prices are being offered by local dealers in certain localities than were quoted a short time ago, but the wool specialists are unwilling to make any predictions as to the future of the markets.

* * *

Collar blight is a fruit disease which has appeared in some of the Pennsylvania and West Virginia orchards. Grimes Golden, and in the Northwest the Spitzenberg also, two choice commercial varieties, are especially susceptible to this disease. In Franklin County, Pa., while on the recent trip of the American plant pathologists, Dr. M. B. Waite of the Federal Department of Agriculture, pointed out the first orchard in the East where collar blight was identified. The collar blight affects trees from eight to ten years old and older, and results in their destruction in five or six years. Dr. Waite suggests a scheme of bridge grafting healthy trees before they are attacked with the blight, which he considers worthy of a trial. He advises removing two inch strips of bark from up near the limbs and down the trees to the roots. Bridge graft these strips with such blight resistant varieties as Northwestern Greening, Black Twig or Paragon. Disinfect with coal tar creosote two or three weeks before grafting, and use wax in bridge working. Leave sufficient strips of old bark so as not to endanger the life of the trees. Next year cut out these remaining strips of bark. This work should be done in early spring. The former plan of rendering Grimes Golden immune to collar blight by topworking onto resistant stocks is working satisfactorily. This new plan is proposed for the purpose of converting Grimes and other susceptible sorts already growing to the equivalent of resistant stocks.

* * *

The National conference to reduce avoidable losses on live stock an organization now being formed, will be composed of the meat shippers, railroads, Institute of American Meat Packers, live stock exchanges and stockyards thruout the United States. Bruises alone last year, it is claimed, caused losses on live stock and meat approximately $15,000,000, and these losses also tended to reduce the nation's meat supply. It is planned to carry on a vigorous campaign in all parts of the country to eliminate injuries in shipment by better methods of handling cattle, and other live stock.

* * *

Senators and Congressmen are hearing from the farmers in regard to the Ralston-Nolan land tax bill, which it is believed would add at least a billion dollars in taxes on farming lands. Michigan members of Congress have given assurances to their state Farm Bureau that the half-million dollar fund being raised by certain interests to spread propaganda for the passage of the bill, will be unavailing, and Representative Carl Mapes declares it has not the remotest chance of ever being seriously considered by Congress. Nevertheless the Washington representatives of the farm organizations are keeping a close watch of this bill and its promoters.

* * *

The 'Daily Digest of Reconstruction News," of August 12, issued by the Council of National Defense contained the information that the War Department was selling a million and a half pounds of surplus wool stocks, asking for sealed bids. This throwing onto the present stagnant market of large quantities of wool is the subject of considerable criticism on the part of wool growers. Investigations made by the American Federation of Farm Bureaus disclosed the fact that this wool which the War Department is selling is low grade carpet wool and should have little effect upon the markets.

A group of farmers' representatives, headed by J. R. Howard, president of the American Farm Bureau Federation, are touring the Far West for the purpose of studying methods of marketing farm products. In the party are H. C. McKenzie of New York and Prof. T. S. Adams of Yale University who are taxation experts and presented a farmers' taxation platform at a meeting of the executive committee of the Farm Bureau Federation in Denver August 16th. After leaving Denver the party proceeded to Salt Lake City to attend a group meeting of the Far West wool growers, to discuss co-operative marketing methods with special reference to wool pooling. Later the party will study the marketing systems of the California Raisin Growers' Association and the California Citrus Fruit Growers' Association with a view to determining the adaptibility of their marketing methods to the marketing of farm products in other states.

* * *

When the House Ways and Means Committee takes up a revision of tax and revenue laws when Congress meets next December, it is believed that the repeal of the "excess profits tax" will be one of the points under consideration, and it will have strong backing as the political leaders seem to be agreed that this tax should be repealed. It is interesting to note, however, that wherever Grange action has been taken and reported to the Washington office, the Granges are found to be almost unanimously opposed to such repeal. This is a subject which will receive careful attention at the coming session of the National Grange in Boston, November 10. It is urged that the subordinate Granges make a careful study of the subject, analysing the effect of the excess profits tax, and the proposed substitutes, as applied to the business of the farm, and by resolutions and discussions, formulate their opinions and communicate them to the state masters and the Washington representatives.

* * *

Secretary A. M. Loomis of the National Dairy Union says the increase in freight and express rates will make much more expensive the transportation of milk, and he questions the wisdom of the present methods of fixing milk and cream prices on the basis of shipper paying transportation charges. The express rate increase authorized by the Interstate Commerce Commission on August 14th, amounts to 12½ percent. This, he estimates, will increase the revenues of express companies by $33,500,000. The commission, however, says that in making its award it has not taken into account the recent wage increase granted the express company employes, thus indicating another raise in rates soon.

* * *

The action of the National Society of Record Associations in demanding that the special committee authorized by Congress to hold a judicial investigation of the subject of rural credits be appointed at once, is resulting in stirring up much interest in the McFadden Rural Credits bill. The Washington offices of Senator Gronna, chairman of the Senate Committee on Agriculture, and Representative Louis T. McFadden, of the House Committee on Banking and Currency, are receiving many letters from live stock and dairymen in all parts of the country, asking for a law which will give adequate credit to the farmers.

* * *

HARRISBURG LETTER

Fairs Must Classify.—Probably the most vigorous supervision by the State Department of Agriculture over county fairs and agricultural exhibitions receiving State subsidies has been launched following the notice of Secretary of Agriculture Fred Rasmussen that he would insist upon all exhibits being classified and placed in competition. Agents of the Department will visit all exhibitions and not only observe the competition, but whether more attention is being given to amusements than to displays of farm products. In recent years there have been complaints that animals and exhibits have been shown and not in fair competition. The secretary says if the exhibits are to be for premiums they must meet all the rules of the game. Failure to comply will mean withholding of the state allowance. Incidentally, the state authorities are making displays at a number of fairs this year.

Urged to Spray.—Secretary Rasmussen is out with a warning to farmers to get busy and save their potato crop. The late blight has appeared generally and as there was a large acreage in potatoes and good reports it is feared there may be serious loss in many communities. The reports coming here indicate that the unusual rains have been very hard on the potatoes.

Special Oats Survey.—Losses of oats reported as due to the weather have caused the State Bureau of Plant Industry to begin an immediate survey of the oats situation. The largest crop of oats in State history was in sight a few weeks ago, but weather conditions have damaged it as they have potatoes and whatever lessons possible will be learned from the observations in the field.

Women and the Vote.—The vexed question whether women will need any new laws to enable them to vote has been settled in short order by the attorney general, who holds that the nineteenth amendment, giving women the vote, operates just as did the fifteenth giving the vote to all men without regard to race or color. In other words, the woman suffrage amendment takes the word "male" out of the clauses of the constitution of Pennsylvania and all State laws relating to the right to vote. It is the duty of officers to register women and the duty of women to see that they are registered.

Farmers Institutes.—Dates are now being arranged for the farmers institutes next winter and only one day stands are being fixed. Lancaster, York, Chester and other counties having the most farms will have the largest number of meetings. Every county in the state will have institutes, three being the minimum, but the plan of having just one day and cutting out many of the time honored and little respected features will be tried. Question boxes and general discussions will be encouraged, and, as last winter, men familiar with the needs of each locality will be detailed for addresses.

The State's Printing.—The State of Pennsylvania seems to get into hot water about its printing about once every twelve years and it would seem that only vigilance of the state superintendent of printing Robert C. Miller, prevented the state from being involved in another "Bird book" pulication. This was to be under the name of a wild life manual, a worthy object, but in which the state was to bear first cost of a book with many colored plates on fine paper, and trust to luck for reimbursement. The discovery that about two-thirds of the bills printed for the legislature are sold as junk has resulted in arrangements to print only numbers as needed. Need is a relative term. For years men have called attention to the extravagance of printing attendant on legislative session and now when paper costs are causing officials to put up stop signs it is found that the lawmakers have been responsible for much printing that is sometimes not even unpacked. And it may be added that the superintendent of printing has called a halt on press agents in various departments using paper of highest grade for sending out screeds for country weeklies and also on engraved stationery being used for letters of every kind.

Getting Teachers Placed.—The new State bureau of teacher service which has been established in the Department of Public Instruction under Dr. Henry Klownover, is at work trying to get teachers for the numerous school districts which are asking aid so that they can start school on time within the next fortnight. The teacher situation has brought about considerable consolidation, but there is still a long distance to go before all districts are supplied.

Standardizing Apples.—The Horticultural Tour which stopped in Harrisburg during the week after ploughing thru one of the worst storms of the year, was marked by an interesting discussion of the new state apple grading law with exhibits in the Capitol. State officials explained the plans to put the apple law into effect this year and J. C. Gilbert outlined the plans of the bureau of markets for reporting prices. The importance of standardizing apples was brought out by all speakers.

Buying Game Lands.—The State Game Commission has optioned over $118,000 worth of lands for game preserves and by the end of the year ten new ones may be created. These lands are to be practically linked up with the forest reserves for which thousands of acres of land are now being optioned for the big buying campaign launched by Commissioner Gifford Pinchot.—Hamilton, Harrisburg, August 23, 1920.

NEW YORK LETTER

Co-operative Organization.—Cortland County, as the center of the Central New York farmers co-operative organization to sell potatoes and cabbage, has organized eight local shipping units and will organize four more to begin service this fall.

Cheaper Milk Direct.—Newfield farmers are arranging to supply the nearby city of Ithaca with milk at 2 cents a quart less than the dealers are asking in that city. The farmers also hope to realize more on their milk than the dealers are now giving them.

Cattle For Argentina.—W. H. Mace of Cortland, one of the leading Holstein breeders, has been touring the country for weeks with agents of an Argentine syndicate buying choice registered Holstein young stock to be shipped to that country. This is a new departure on the Southern buyers' part, and only the best class animals are considered.

Holsteins at the Fairs.—So far local or county fairs of the state are not showing as fine exhibits of Holsteins, nor of any other cattle as in former years, due to scarcity of labor and the expense of fitting show animals for exhibition. The State Holstein Association will send representative cattle on a tour of Southern fairs.

Breeders are urging the adoption of a 3.5 percent standard as a butterfat basis in computing milk prices, with cuts or additions as the test falls above 3.5 percent, instead of 3 percent as now.

Syracuse, N. Y., has been designated as the meeting place for the National Holstein Convention next year. At that time 225 of the best Holsteins in the country will be held. Since this state last entertained this convention five years ago, its state's Holstein association has come to be recognized as one of the strongest animal organizations in the world.

The directors of the National Association are now hearing evidence in the Cabana case in which fraudulent records are charged.

Barrel Situation Serious.—Apple barrels are selling for $1.50 each, and many cooperages are unable to find more raw material and will close down when the present stock on hand is exhausted. This price is double last year's high price for apple barrels.

Big Price For Hops.—A northern county will harvest 100 bales of hops, where at one time over 20,000 bales per season were sold. The new demand for hops for home brew will bring hops to $1 a pound this fall, it is said.

Railroad Exhibit.—The New York Central Railroad will for the first time have an exhibit at the state fair consisting of a refrigerator car and demonstrations. The State Department of Farms and Markets will have a fleet of 20 big trucks tour the grounds daily to show how many cities have overcome freight delivery problems.

Visit of Boys.—Farm boys of Texas numbering 162, on a country wide tour, visited Cornell Agricultural College this week, the State game farm and other points of interest, expressing themselves as greatly interested in what they saw.

Crop Notes.—Local thunder showers have done much damage this week, burning barns and ruining grain that is sprouting in the shock. The western fruit belt now expects the greatest apple crop it has ever known. Peaches and grapes will also be big crops. Winter wheat is found to have arrangen 22.3 bushels per acre this year, or a little better than the 10-year average. Oats will yield better than last year, but are not quite up to normal. Corn will not do so well. Onions, cabbage and tomatoes are 5 percent over last year's crops. The average yield of clover was 1.⅔ tons per acre; of all hay, 1.26 tons per acre. Potatoes will yield 5,000,000 bushels less in the state than last year. They are now down to $1.75 per bushel.

NEW JERSEY NEWS

Crops May Rot.—Too much rain and a great excess of humidity in the state for several days may cause rotting of products of the fields and orchards. Rain fell daily in practically all districts, while they was a deficiency in sunshine. Farm work, such as harvesting of grass a grain as well as ploughing for winter wheat, has been practically at a standstill. Excessive dampness is causing some apprehension of rot in potatoes, grapes, fruits, tomatoes and berries. The rot has appeared, but so far does not amount to much. Some corn is turning yellow from moisture, as well as oats sprouting in shock. Cool, moist weather during the next few days may cause injury. Dry, bright, sunshiny days will greatly aid growth. Crops on the whole in Jersey are in excellent condition in spite of the drawbacks of the past week or so. In Central and Southeast districts corn is caring well and promises a big yield. In the North, some corn is too wet and a little is being abandoned, while the same applies to oats. Meadows and pastures continue to grow. Potatoes are weedy but digging is in progress where not too wet. The crop is large. Late crops potatoes are under cultivation and growing excellently. Peppers are fine in growth but fruiting poorly. Some wheat, rye and barley is being threshed. —Kelly, Trenton, N. J.

Tenderfoot: I had an awful dream last night.
First Class Scout: Well, what did you dream?
Tenderfoot: I dreamt that I was eating shredded wheat and when I woke half of the mattress was gone.—Boys' Life.

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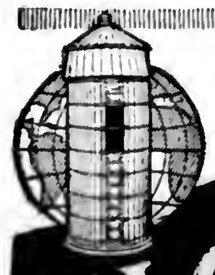

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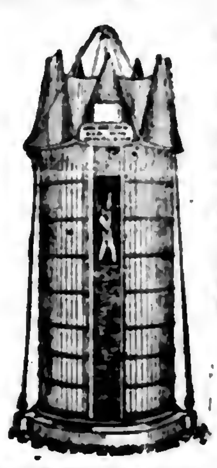

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DAIRY

Newspaper Editorals and the Farmer

The Interstate Milk Producers' Association, which supplies Trenton, N. J., with milk, announced a few weeks ago that the August price would be ten cents a quart, a rise of one cent. The Trenton "Times" published an editorial entitled, "As Was Expected," stating, in substance, that the dairymen, unable to find an "excuse" for the raise, had increased the price simply because they had the power to do so, and advocated a decreased consumption of milk until the farmers should come to their "senses."

The writer had been talking to a local dairyman, a very good and hardworking farmer, who told him that it was almost impossible to make ends meet at prevailing prices of feed and labor. Feeling that the "Times" had stated the case unfairly, he sent the following letter to the paper, which, to his surprise, was promptly and prominently published:

DEFENDS FARMER AND HIS PRICES

Correspondent Blames Speculator and Middleman for High Cost of Living

To the Editor of the Times:

Sir—It is too bad that such an unfair editorial should appear in the Trenton Times as the one entitled "As Was Expected" in Saturday's issue. No doubt the person who wrote it was unacquainted with the facts as they exist. To begin with, the price of dairy feeds has risen to an almost prohibitive figure, compared to the price which the farmer has received for the grains from which they are made. Of course, it is not now necessary to feed grain heavily as in the winter, but some is required as a supplement to pasture. Contrary to the statement in the editorial, pasture is becoming short in this section at least and cows are dropping off in production as a result. At present we are in need of rain, in spite of the abundance of a few weeks ago. And it must be a peculiar farmer who complains of "rank" growth of vegetation" in the pasture!

A third factor is the increasing cost of labor. Farm wages are higher than last year. The dairy business requires hard work and long, unreasonable hours every day in the year, Sundays, holidays and storms included. In the past much milk has been produced by the unpaid labor of women and children. Where such labor must be supplanted by high-priced help, the cost of production of a quart of milk is often greater than the price the farmer receives for it. There have been a great many dispersal sales of dairy herds this spring, not only locally, but all thru the milk producing sections, simply because their owners could not continue business under existing conditions at a profit.

It is extremely unfortunate that any section of the press should engender animosity between town and country. While it is true that the city man desires to buy as cheaply as possible, and the farmer to sell at as great a profit as he can, the two are also dependent upon each other; the one for his living, the other for his livelihood. No one will deny that the farmer is justly entitled to a fair profit on his investment and a fair wage for his labor. Food, shelter, fuel and raiment are the necessities of life, but no one expects the builder, the miner or the clothing merchant to donate his goods or his services to humanity. It is just as unthinkable that the farmer provide a necessity of life at a loss to himself. He has as great a right to a good living and a fair profit as any producer.

Instead of stirring up hatred between producer and consumer, the city press would do far better to attack those go-betweens—the middlemen and food speculators—who rob the farmer on one hand and bleed the consumer on the other. The speculator in food, who increases the cost without rendering a service, should be done away with by law; the middleman, who is a necessity, controlled by law.

Let me conclude with this quotation from the current issue of the "Pennsylvania Farmer," to show one reason why the price of food to the consumer is so much above the price the farmer receives:

"Would Limit 'Spreads.'—The New Jersey State Federation of Women's Clubs, in co-operation with the State Bureau of Markets, has started propaganda to limit the retailers' 'spreads' between buying and selling prices to 50 per cent of the buying price. For the past four weeks local committees of women from ten of the prominent cities in New Jersey have reported retail prices once each week to the bureau at the State House while the agents of the bureau have reported wholesale prices of products of the farm. Gross profits of from 75 to 200 per cent have been found to be common. It is held by the bureau that this is too great, and that it prevents the full use of nearby grown valuable food products by the general public and discourages production through lack of demand. It is claimed that 50 per cent between cost and selling prices is sufficient on any kind of produce."

Very truly yours,
R. L. SCHARRING-HAUSEN,
Glen Moore, N. J.

However, the editor was evidently of the opinion that the farmer was bleeding the poor public, for he dug up the following gem and came out with it as an editorial a few nights later:

PROFITEERING IN MILK

A young farmer who concluded to enter the milk-shipping business on a small scale last Spring, bought seven cows, paying for them and for necessary milk-buckets and other small equipment for the dairy, something over $800. Since then he has had to buy but $35 worth of feed for the seven cows. In conversation with the writer a few days since the farmer stated that he had already sold over $700 worth of milk since he bought his cows a few months ago.

That one experience may be somewhat out of the ordinary but it ought to show that there is more profit in milk-production than some of the pessimists are willing to admit. It is in view of pasture conditions and of the extra heavy hay crop, which ensures a big drop in the price of that essential feed on the farm, that many persons are wondering why it has become necessary to raise the price of milk to consumers in Philadelphia and some other cities, to 15 cents per quart in the middle of the summer.

There have been times when the fields have been burned brown and there was such a shortage of pasture that milk shippers had to feed their cattle as heavily as in the winter time, and milk shipments took a big drop, but this is not the case this year. Even some farmers are inclined to believe that about the only plausible explanation for the boost is that the organization of milk producers knew that they could get the extra money and so they went after it. During the past year a good many dairies have been dispersed but most of the cattle found their way into other farmers' herds while new people have entered t dairying game of late.—Mount Holly Mirror.

No doubt many farmers would gladly purchase cows that would clear expenses and pay for themselves in three months—at $100 apiece!

Incidentally, Mount Holly, the birthplace of this cow-classic, is a town of about 5,000 inhabitants, the county seat of Burlington County, N. J., and the center of a farming district upon which it largely depends, and the "Mirror," a typical small-town weekly newspaper. No doubt, however, Mount Holly is more metropolitan than New York, and ye editor delights to swat the farmer.

The incident of the editorials shows one thing very plainly, that city newspapers, as a rule, delight to distort matters pertaining to the farm, especially if the farmer can be depicted as rolling in ill-gotten wealth. City readers revel in attacks upon the farmer and the profiteer; if the two can be shown as one, it saves space. Personally, the writer believes that city newspapers print such stuff because the readers like it, rather than from the conviction of a just cause. Here is another clipping, branding the farmer as a profiteer more by implication than by direct statement:

THEN AND NOW

The "Trenton Twenty-five Years Ago" man of the Sunday Times-Advertiser tells us that at the beginning of August, 1895, "the best sugar corn was selling at 15 cents a dozen, watermelons 20 to 40 cents each, shelled lima beans 20 cents a quart, potatoes 25 to 35 cents a basket and spring chickens 22 cents a pound." The present-day housekeeper must yearn for the return of the old days, though the prices 25 years ago were probably regarded as excessive. Now they are from 100 to 500 per cent higher.

It seems very plain that farmers will never better themselves by "writing to the papers" with a tale of woe, or even with a carefully drawn statement of conditions. The city reader, and the editor who moulds his opinions, will either not believe or not care. "Something ought to be done" true enough, but we've got to do it ourselves. Doubtless the means will be found in co-operation—and cost accounts. An editorial in the New York "Times" recently summed up the matter in a very fair and broad-minded fashion: In the maze of vicious and misleading statements concerning all matters pertaining to farming that appears in the city press, it certainly is encouraging to discover in one of the leading newspapers of the country such an editorial.—R. L. Scharring-Hausen, New Jersey.

AUGUST DAIRY REMINDERS

If a cow kicks, moves over from the pail or switches you with her tail, it pays to count ten before whacking her with the milk stool. By that time possibly all will be going well and you will have saved trouble for yourself and the cow. Every whack and abusive word handed to a cow increases the difficulty of managing her easily. Quiet movements about a dairy cow will usually increase the animal's confidence and she will try to do all that is expected of her.

* * *

The feeding of grain to dairy cattle throughout the year has an advantage beside the increase in the milk. It helps to bring the cows in from the pasture at feeding time. They are anxious to reach their stanchions without any urging. They seem to appreciate the special treat and it has a wonderful influence on their producing ability and general appearance.

* * *

Cows should not be considered dirty creatures because they often use poor judgment in caring for themselves in the stanchions. In their natural environment cattle were not fastened in one place by the neck and their grazing ground was over a wide territory. When they are fastened where they cannot range, their care is up to the owner. Plenty of clean bedding and a well cleaned barn will clean udders on the cows. Cows that spend the night in clean pastures come to the barn clean in the morning. Cows fastened in the stanchions need much co-operation on the part of the owner if they are to appear clean in the morning.

* * *

The dairy farmer with family of children has one advantage over the city man. The farmer can control the source and cleanliness of the milk supply used by his family and the growing young folks can be assured of a quantity of fine food. The desire of most farmers to produce clean milk and the sanitary laws help to insure clean milk for the city man's family. But it can scarcely be expected to be as good as the supply fresh from the farm that has endured the minimum of handling.

* * *

It pays to keep the breed of dairy cattle that predominates in the neighborhood. And buyers from outside will be more apt to visit the section. Auctions of surplus stock by co-operative associations will attract the class of buyers who can afford to pay good prices.

* * *

The profits in dairying from spring to fall often depend on the quality of the pasture. Fields that are nearly bare may be called pastures. Sometimes fields of weeds are classed as pastures. It seems as if more attention should be given to developing rich pastures that will furnish an abundance of green feed. Heavy producing cows should be able to eat their fill and then lie down and chew their cud. If a cow has to hunt all day to pick up enough lunch to avoid starvation she can hardly be expected to produce an abundance of milk.

* * *

When erecting silos, repairing fences or mending floors in the barn be sure and pick up all the nails and bits of twisted wire that may drop into the hay and be eaten by the cows. For many years cattle grazed where no men appeared to scatter bits of metal. Their instincts of caution are not sufficiently developed to enable them to always avoid eating such material.

* * *

Grounding the fences or using steel posts is a great help in preventing losses of cattle from lightning. Lightning rods have been proven by the insurance companies to be a great protection to dairy barns. At least it is a great comfort to the dairyman to know that the barn is properly rodded. Then he knows he has done all he can do to protect the men working in the barn as well as the cattle. If a rodded barn is struck the occurrence has been beyond the power of man to control. It pays to do the best we can to avoid trouble. And lightning rods seem to be one way of fighting off bad luck on the dairy farm.—R. G. Kirby.

WEAVER PIANOS

FOR over half a century, in the best American homes the sympathetic voices of Weaver instruments have responded to the moods and fancies of their owners.

In Weaver Pianos the joys of youth and the moods of age find ample expression. To own a Weaver is to foster music habits of the highest type.

Into Weaver Pianos go not only the best materials money can buy, but all the experience, the care, the patience, the traditions of the House of Weaver. No time nor labor is spared in making each individual Weaver an artistic triumph in itself.

As perfect in mechanism, as rich in tone, as artistic as skill can make it, the Weaver Piano is a pride and joy that grows and grows as the years go by.

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Factory and General Offices: York, Pa.
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SPECIAL OFFERS OF PURE BRED LIVESTOCK

JERSEYS.—Mixed car load of females, also several young bulls. Registry of Merit and Cow Testing Association Records.
HOLSTEINS.—Several Bulls, 6 to 10 months old, A. R. O. dams. Excellent Breeding.
Milking shorthorns of good breeding, at reasonable prices.
GUERNSEYS.—Herd dispersal., largely Imported blood.
AYRSHIRES.—Few young females.
All of the above are pure bred cattle with proper registration papers. Address inquiries to D. K. SLOAN, Secretary. Towanda, Penna.

BRADFORD COUNTY LIVESTOCK BREEDERS' ASSOCIATION.

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Green Mountain Silos
can still be had for this season's corn crop

By much overtime work, we have caught up with a big season's business and can now handle your silo order promptly. We ship the same week order is received; often the same day. And the silo will please you, too.

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Here is the Heater You'll Want this Winter

HEATS WHOLE HOUSE | KEEPS CELLAR COOL | USES LESS FUEL

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TRADE MARK

ONE PIPE FURNACE

You add to the attractiveness and comfort of your home when you install this powerful heater. You do away with the dust, dirt and fire-danger of stoves in several rooms and the work of lugging fuel in and ashes out. Your heating plant is down stairs, out of the way, where it belongs. And with the use of ¼ to ½ LESS fuel (coal or wood) your home is WARM all through---every room—even in away-below-zero weather.

This Powerful Durable Heater is built for life time use. It weighs from 100 to 300 lbs. more than most of the "Pipeless" or "Onepipe" furnaces---and this EXTRA weight is largely in the firepot and grates where the hardest wear comes. Its Straight Firepot, Large Firedoor, Extra Large Register and other STEWART features which make it so successful, are the result of 88 years of stove-and-furnace-making experience.

They are selling so fast that we probably will not be able to fill all orders this fall. Avoid disappointment by placing your order NOW with local STEWART dealer---there's one in most every town and city.

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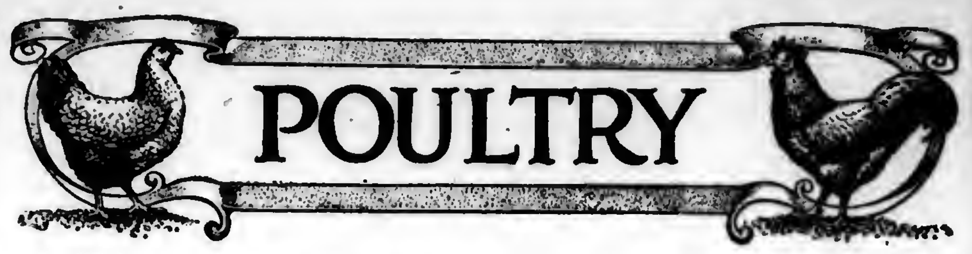


POULTRY

PREPARE BIRDS FOR SHOW NOW

Along in the summer the enthusiasm that gave the poultry work a rosy aspect is apt to fade and one of the best ways to revive it is to begin plans to visit some good poultry show next fall or winter—preferably one close to your own home.

There is no doubt about the increased revenue that comes from the farm flock when standard bred poultry is kept thru the sale of breeding stock and hatching eggs and the local show is a fine place to make a start in letting your neighbors and friends know what you have. It is true that you may not win at your first show because conditioning a bird or animal for the show ring is something of a job—as anyone who has ever tried it can well testify—but by beginning along early in the summer and giving special attention to the most promising youngsters in the flock is one of the best ways in the world to make a start. Besides it pays from a purely commercial standpoint.

Those pullets which are given this extra care will probably develop into the quickest profit payers and if kept for breeders next spring will prove their worth in producing chicks that will be a credit to any farm flock. Notwithstanding the admonition to hatch early and the load of information that is at hand in regard to brooding chicks and getting them started upon the right road it is the summer work that often makes or spoils the usefulness of the farm flock. This is just as true in a flock of mixed chickens as it is with standard-bred youngsters and no more appliable to the fancier than it is to the person who never expects to see the inside of a show room.

In summer when the pastures become dry and dead the farm that has provided a green crop over which the youngsters can forage such as rape, chard, or any of the crops which stand late seeding will find himself ahead of the game because his flock will mature in better shape and feed bills will be less extensive. But do not skimp on feed believing the chicks will pick up their living on even the best of range for the result is very apt to be a disappointment. Maturing young stock so that it will go into laying quarters in the fall in really laying condition is one of the big problems of the man who specializes in poultry for eggs alone. The chicks must have feed and a variety of grain and ground feed placed in hoppers where they can have free access to it, not only to keep them growing, but to save feed bills as opposed to the old method of hand feeding.

In culling more than half a hundred flocks late last winter I found the chief reason for empty egg baskets to be the preponderance of immature pullets. Such pullets were virtually kept all winter at a loss and laid only late in the natural laying season when eggs were normally low. Such pullets when kept for breeders seldom produce chicks that will mature into proper size, their progeny is weak and chick losses are correspondingly greater. Twelve years of specializing in poultry has taught me that it is better to sell immature pullets in the fall than to keep them thru the winter for the few eggs they will lay in the spring and that the surest way to bring about deterioration in the flock is to use them as breeders. All of which has little to do with the show room except that the undersized specimen seldom wins and other things being equal should never do so.—W. C. S., Ind.

WHY DOESN'T THE FARM FLOCK PAY?

The greatest difficulty in getting the farm flock to pay, is the lack of proper care, such as housing and feeding a balanced ration. We have always considered the farm flock one of the best paying crops on the farm.

Ending the year 1919, our flock of 280 purebred Barred Rocks laid 160 doz. eggs. The month of December showed a profit of $75.

The Way We Feed.—We scatter the grain feed composed of one part of each, cracked corn, wheat and oats in deep litter in the morning. We keep dry mash before them at all times. I make my own dry mash from equal parts of fresh ground middlings, wheat bran, ground oats, beef scrap and add salt.

At noon every warm day I open the doors and let them have free range. They have access to the barn yard where cows are kept. I sow buckwheat and crimson clover near the hen house in August, fence it until October then take the fence down and let them harvest the buckwheat. The clover makes the finest green feed I have ever seen. I feed corn on cob at night and they never fail to lay.

The reason we keep Rocks in preference to Leghorns is because they are a better farm flock. The Rocks, Reds and the larger breeds will not stand confinement like the Leghorn, nor do their eggs bring as much. We sell our eggs to a large hatchery near us for a premium of 12 cents a dozen above the home market, taking all our eggs from January 15 until June 15.

The advantages of the Rocks or R. I. Reds above the Leghorn as a farm flock are many. The Rocks or Reds will pay a good profit if let run at large, while the Leghorn must be kept housed during the winter. They will pick up enough waste on the farm to make their keep equal to the Leghorn housed.

When you want a chicken to eat, you have something. We dressed a Barred Rock hen for Christmas that dressed 8½ pounds. When they are thru laying they will bring more on the market than any other fowl. I shipped three crates of young cockerels to the city last September. The commission merchant sent me 8 cents a lb. above the market quotations, and said he would pay me the same for all I had to ship. A few days later I received a letter from another commission merchant stating that he was in position to handle some fancy birds such as I had shipped.

There is no doubt the Leghorn is best for large commercial purposes where eggs are the main object. But I could speak of many advantages the Rocks or Reds have above the Leghorn as a farm flock where not over 300 hens are kept.—J. R. H., Md.

WOMAN POWER WASTED

Let me second the editors on the question of woman power on the farm quick before anyone disputes the point. Nothing ever was truer and, frankly, I don't know why we do as we do unless because habit is hard to break. Almost none of us make any systematic effort to conserve woman power. We all do all these things charged against us—and if one of us neglects any of them our neighbors criticize. To tell the simple truth, I used to do more heavy work in the days when money was not so scarce than I do now because at that time I could pay the doctor for patching me up afterward, and now I can't. I am obliged to use a fraction of what the doctor's bill would be, to hire the work done or else let it go undone. As a matter of fact, much of it never gets done at all. It is practically impossible to hire any one to wash or clean house and it is becoming almost equally impossible to get a doctor. Here one doctor is alone on territory formerly served by five and he can't possibly cover it all. I am degressing a little but this is one cause of our wasted woman power here.

My working day is from about 5.30 till 9.30—practically 16 hours—and I don't think I work longer than most of my neighbors. I had no idea that any 13 women out of every hundred on farms had a regular vacation during the year and I can't really believe it now—they probably reported it but I think most of it was in their minds.

My acquaintance includes eight or ten rural communities in which I have taught school and I don't know one farm woman who ever has had a ghost of a vacation. I have seven rooms to keep in order of most of my neighbors have more. Most of us clean kerosene lamps and do our own sewing. Vacation, indeed! My heart aches when I think how my poor old mother longed, day after day for years, to visit her friends just for a day—some of them only four or five miles away, but they lived their lives and died and she never saw them. They used to visit her till they decided there was no use doing it all any longer, but they didn't have anything resembling a vacation themselves. Even a week of rest or change during the year would seem like a glimpse of heaven; besides, it would give us added strength for the rest of the year. Neither do the men have vacations. Some have more labor savers than the women and some don't, but in either case it is much as our grange master aptly said "So called labor savers are often only speeders by which more is done than would otherwise be possible." The most prodigally wasted thing in the world is human power on the farms. It is partly habit but quite largely it is the result of the economics system by which the profit goes to the distributor, not the producer.—E. M. A.

FARM LAND SPECULATION

Editor of Pennsylvania Farmer:

Sir—Your very timely editorial on "An Unjustifiable Boom" (issue of May 29th), gives expression to the thought that perhaps, after all, there may be something fundamentally wrong with our present method of treating land—the source of all wealth. You conclude the editorial by stating that "Nothing can add more to the present unfavorable agricultural condition than a continuation of the present speculative boom in farm lands."

What is to be done about it? Speculation in land is entirely legal and held, by many of our citizens, an entirely moral process, so our attention should be fixed first, on its morality or immorality, and second, on its continuance or its abolishment.

If what I read in the "Pennsylvania Farmer" and other farm journals, abetted by many city editors who seem to have caught a glimpse of a "food shortage" in the near future, is true, then something must or at least should, be done to avert what may be our portion—starvation—near or actual. You hold that speculation in land is the chief cause for the absurd conditions which confront us, and, I take it that you would discontinue it; but you point out no plan or offer no suggestion which will remedy the evil. Do you imply there is no remedy? The real farmer, in other words, the person who takes up a given portion of farm land for the purpose of producing more wealth, cannot be called a speculator, and, as he generally produces more wealth than he or his family consumes he should be looked upon as a public benefactor. You state that average farm land prices in the United States have advanced 21 per cent within the last few years. Who or what has done this?

Evidently the real farmer I have mentioned is not guilty, for he generally is careful about booming the price of his land, for fear that it will reach the county assessor's ears, who can generally "get" the poor, hard-working farmer (who keeps on the job) much easier than the rich, idle, speculator (who is never on the job).

If more farmers, possessed with efficiecy and desire to become useful producers of wealth, should locate on any given portions of land, those portions of land will become possessed of a value arising from their social advancement in demanding better roads, schools, etc., things which the individual farmer, outside of a community, would find hard to obtain. Should this community of farmers collect the added value of their land for the good and welfare of their community, the annual visits of the County Tax Assessor would be looked upon with equanamity, for he would only be then an agent to collect and disburse their own money in the procurement of better roads, schools, etc.

This practical, useful, producing farmers would know that none of their money was going into a speculators' pocket, because there would be no land speculators in that community. Land speculators are not the imbeciles some people imagine they are; they do not attempt to collect rent from, or put a selling price upon, land whose entire rental value has been collected by the community.

Such communities, however, do not exist, and, as long as they do not, land speculators will continue to exist and to fatten on the social growth of useful producing individuals. Land speculation will continue to work out its evil destiny and make this land—the greatest masterpiece of God's beneficence—a land of landlords and tenants. It will continue to hamper and make harder and more costly the lot of the hard working farmer, as it will continue to saddle the cost of its now producing idleness on the back of that patient, long suffering ass—the ultimate consumer.

Let us get down to bed-rock in this matter. If land speculation is founded on justice and the common rights of humanity, then we should stop our denunciation or our questioning of its results, but appeal to the generosity of the land speculator, and, with thankful hearts, sing his praises for permitting us to live and work on the land which the Lord his God gave unto him, but, if in our best informed judgment, land speculation is not founded on justice and common rights, then—Single Tax—for there is no other way.—Oliver McKnight, Phila.

ONE-DAY FARMERS' INSTITUTES

Farmers' Institutes during the 1920-21 season will be limited to one-day sessions in each community, except in rare cases where conditions make it advisable to hold two-day sessions. Morning institute sessions will also be eliminated during the coming season.

These changes were decided upon at a conference which Secretary Frederik Rasmussen, of the Pennsylvania Department of Agriculture, held with the County Institute Chairmen at Pennsylvania State College in connection with Farmers' Week.

It developed at the conference that where the practice has been to hold two-day sessions, the attendance at the first day's meeting was always extremely small and that there was little interest in the first day's program. It was also the concensus of opinion that morning sessions were of little value on account of the small attendance, except in such cases where communities have featured a dinner or similar attraction, each year that brought out the crowds in the mornings. In scores of cases during the past winter, speakers were forced to drive eight or ten miles, late at night through zero weather, arriving at their destination long after midnight, in order to be on hand for the opening session of institute the following morning, only to be greeted by an audience of a dozen or less.

Secretary Rasmussen also announced that the Department of Agriculture would follow the same course as in previous years in regard to securing meeting places, the department always having insisted that the community furnish a meeting place for the institute sessions as an evidence of the community's interest.

The plan of sending to each community, speakers who have specialized in subjects of particular interest to that community will also be adhered to, while arrangements have been made for the co-operation of the State College Extension Department in furnishing home economic and similar specialists where their services are wanted.

HOW TO LIVE

Worry less and work more.
Ride less and walk more.
Frown less and smile more.
Drink less and breathe more.
Eat less and chew more.
Waste less and save more.
Preach less and do more.

IT'S NOT ALWAYS EASY

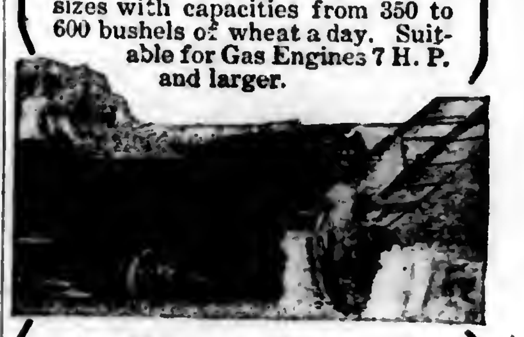
To apologize,
To begin over,
To take advice,
To admit error,
To be unselfish,
To be charitable,
To face a sneer,
To be considerate,
To keep on plugging away,
To wear a smile—
BUT IT ALWAYS PAYS.

No, toads are not beautiful, but they are effective little policemen.

FARQUHAR

The Farquhar principle of separation ever insures clean fast threshing. We have manufactured Threshers for nearly 60 years, and our present modern line has been developed by continuous field experience.

Rake Separator shown here is a most practical and economical machine for the farmer who does his own threshing. Made in two sizes with capacities from 350 to 600 bushels of wheat a day. Suitable for Gas Engines 7 H. P. and larger.



Our Vibrator with Self Feeder, Wind Stacker, etc., is suitable for large crops and merchant threshing. Improvements giving increased separating and cleaning facilities added this year.

We also make a special Thresher for Peas and Beans, and a Peanut Picker.

Farquhar Threshers are best operated by Farquhar Steam and Gas Portable and Traction Engines. Illustrated Thresher and Power Catalogs sent free on request.

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P. L. ROHRER
SMOKETOWN, LANCASTER CO., PA.

Help Wanted

Wanted Experienced Bookkeeper for Farm Assistant

Single man preferred, as good board and room can be furnished. Should be a good penman, capable of operating typewriter and willing to make himself generally useful. State salary and give references, with experience in first letter.
Address LAUREL LOCKS FARMS, Pottstown, Pa.

HELP WANTED

Good milf hand, first-class butter and creamery man; farm hands, milkers for De Laval milking machines. Good positions for the right kind of men on one of the largest and foremost commercial farms in New York State. Good wages with fine board and lodging to single men, and good houses to married men. Address WHEATFIELD FARMS, R. F. D. 14, LaSalle, N. Y.

Wanted Married Man Experienced in Hog Raising

To care for 100 to 150 head. Must be able to butcher and prepare meats for market twice weekly during the winter and raise all crops for feeding and care of hogs during the summer. Mention salary, experience and reference in first letter.
Address LAUREL LOCKS FARMS, Pottstown, Pa.

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Part or full time, Write for full particulars.
PENNSYLVANIA FARMER
261 S. Third Street, Philadelphia, Pa.

NEURASTHENIA: WHAT IT IS

In one of those question departments run presumably by a doctor but actually by his substitute, there was once the question "What is neurasthenia?" and the smart Alec answered: "There is no such thing." Now, if this question was asked by a person who had a neurasthenia victim in the family, this flippant reply may have caused a lot of damage. It is entirely possible to "devil" a neurasthenic into much greater trouble than she need ever experience, by ignorance of the true nature of her malady. For there is certainly such a thing as nurasthenia—it is as real as smallpox.

Neurasthenia, brain fag, nervous exhaustion are all terms that cover pretty much the same thing. It is a state of the nervous system that sometimes follows overwork, sometimes over-indulgence in "society" or other pleasure, and then again it seems to be caused by a certain incompleteness in the life of the person. Thus, young girls who have nothing to really occupy all their active young lives may fall victims. Sometimes we see it stated that a neurasthenic is born, not made. It seems very true that some people are just cut to wear out, with or without wear. The late war brought this out very vividly. The so-called shell shock cases were really nervous breakdowns on the part of the people who, if their lives had run along very evenly and easily, would never have lost their "nerve," because they had just enough vitality to slide thru life on easy terms. But the strain of service was too much for them. Not that they were cowards or anything like that. They just had not a surplus of nervous energy, such as the perfectly normal have. Theirs was the quantity that will reach for the uneventful life, but which runs short when the extra strain comes. So it is with the neurasthenic. If she has an unlooked-for call upon her nervous reserve, she topples over.

I say "she" because there seem to be more women neurasthenics than men, tho there are many business men who get it.

Indications of Nerve Breakdown

The first indications of nervous breakdown are various. Perhaps they can be summarized as restlessness, fidgetiness (inability to keep the hands or feet still), inattention or inability to hold the attention and more or less irritability. This irritability may be bad temper or snappiness that was not natural to the person before, or jumpiness at sounds, or any other signs that show a lack of poise. Loss of appetite is not always a sympton for there are neurasthenics who eat like pigs, a characteristic not there before. As the trouble goes on, there may be a great loss of memory for detail, or painful awareness that the attention cannot be held. We listen to a conversation and do not know what the people are talking about.

Scolding and quarreling are the very worst things to do with such people. Rousing the will power is not the treatment that is required. The will power is tired out and wants a rest. The more it is needed the more tired it gets. [illegible]

fresh air, nourishing food and being let alone are about all that we can give. Some people advocate the absolute rest cure that includes confinement in a room all alone, forbidding the patient the sight of any one. Young people will not often find this of great benefit, as they chafe under the strain, which is only another form of irritation.

Of course, there are people who enjoy being fussed over and who resort to "nerves" as a means of keeping their surroundings dancing attendance. These are usually spotted by their relatives easily enough. But let us not apply the same principle in the wrong place. A sensible family doctor will help bring round the stumbling nervous system, and the sooner he is called in the better, for a serious nervous breakdown will ruin a person for decades or for life.

Beware, however, of the advertised "nerve remedy." If that is what you need, the doctor will give it and at a much lower price. Perhaps the trouble is not neurasthenia at all; perhaps it is an internal organ out of place or out of commission. In this case the nerve remedy will be a sheer waste of money, besides giving a serious trouble time to get worse.

One plea I make, above all. Don't let the family nag a neurasthenic into the depths of a serious breakdown by teasing, poking fun or scolding at the early symptoms. When a person is well on the road to nervous exhaustion, it takes very little sometimes to push them overboard. If that girl of 17 grows hysterical over the jokes of the boys, take alarm. If mother, always cheerfu and jolly, gets snappy and jumpy, "just tired" does not explain it. Do something more than wipe the dishes for her. A neurasthenic is a sick person and needs as systematic care as a fever case. Fewer of us would be nervous wrecks if we had recognized the symptoms early enough and gone after them right. —Harriet Boewig.

HELPFUL LAUNDRY HINTS

To save my linen and a great deal of labor as well, I use a washing compound made thus: Put ½ lb. soda in an enamelware dish and pour over it 2 qts. of boiling water. Cut ½ lb. good grade washing soap into small pieces, put it into a saucepan with 2 qts. of cold water. Bring to a boil, and when soap is all dissolved add the soap liquid to the soda liquid and stir until the mixture has the consistency of thick jelly.

Rub seams and other parts of the linen with this and let them soak in water over night. Fill the boiler full of soft water, and add to it 1½ pints of the soap-soda mixture. When lukewarm put in your linen and let it boil 20 minutes. Rinse it thoroly, and it will be white and clean.

Soda must never be used for laundry purposes unless it has first been dissolved in boiling water, because the soda may "eat" fabrics.

Clothes Cleaning Helps

To clean light colored velvet, corduroy or felt, rub the soiled portion lightly with the cut surface of a day-old loaf of white bread, cutting off the surface as fast as it becomes discolored.

For washing corsets, choose a clear, sunny day. Make a strong solution of good soap suds and a small amount of ammonia. Spread the corsets on a clean board or table and scrub with a good stiff brush until thoroly clean. Apply clear water in the same way to rinse them, and hang immediately in the sun. Do not wring; let them drip dry, for thus dried the shape will not change.

Dingy towels may be restored to whiteness by putting into kettle of cold water, adding shavings of soap and lemon juice. Let come slowly to a boil, rinse, blue and hang in the sun.

Fringed bedspreads should not be wrung out but hung dripping wet; thus the fringe will not mat together.

A few drops of red ink added to a pail of water makes a delightful "last water" in which to rinse flesh-colored georgette crepe or silk waists that have lost their color freshness.

A little gum arabic (1 oz. powdered gum arabic dissolved in 1 qt. boiling water strained and bottled for future use) added to starch will give the garments an appearance of newness; and they will keep stiff and clean longer than if plain clear starch is used.

When candle wax drips on a dress that is unwashable, it can be removed by laying an ink blotter over and under the places, pressing with a hot iron over the blooter. Chewing gum needs a solvent like chloroform or ether, which will not hurt delicate colors. Never wring or twist delicate silk to get out surplus water after washing. Either lay it wet on a white blanket or roll it up in a heavy turkish towel to absorb the surplus moisture. This will leave it just right for ironing in an hour or two.—Mrs. Agnes Miller.

Gruesome

Teacher—"Who can make a sentence with the word 'gruesome' in it?"

Little Willie—"I can. 'The man stopped shaving and gruesome whiskers.'"

SIMPLE YOKE OF FILET CROCHET

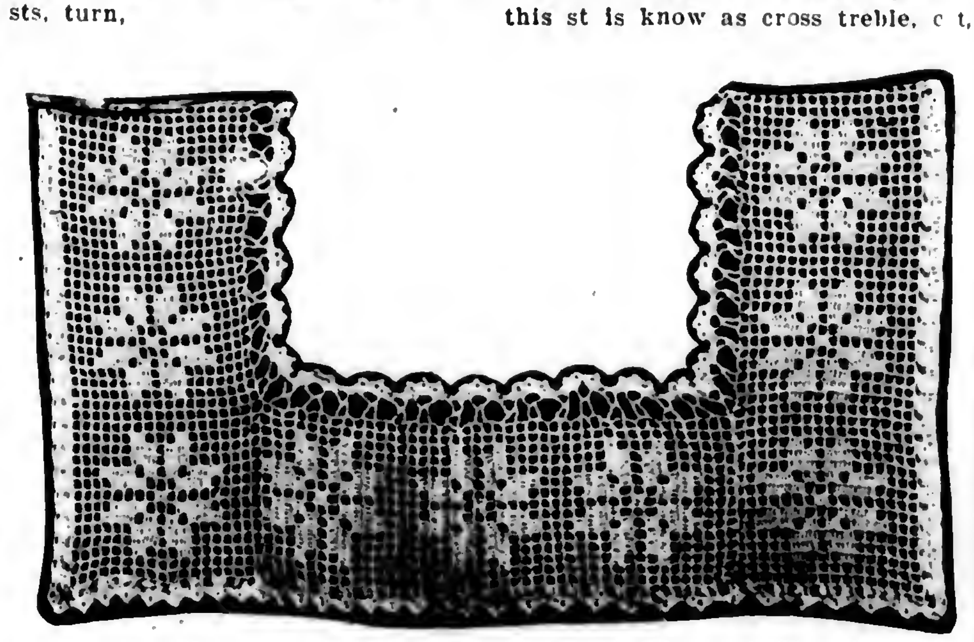
By Jeanette Bell

This yoke is a very practical yet simple pattern and one on which beginners can practice. It can be made any size required by adding as many stars as are necessary for a given measurement. The size thread used is a matter of choice, No. 50 Cordonnet crochet cotton is the medium size and most used number. The model was made of pink but white can be used, if desired. Start with 64 ch sts.

1st row— 1 d c into the 4th st, 5 ch sts, skip 4 sts, 1 d c, 18 sp, 5 ch sts, turn,

2nd row—18 sp, 3 ch sts, skip 2 sts, 1 s c, 3 ch sts, 2 d c, 3 ch sts, turn,

3rd row—1 d c, 5 ch sts, 1 d c, 6 sp, 1 gr, 1 sp, 1 gr, 7 sp, 5 ch sts, turn,



Filet Crochet Yoke

4th row—7 sp, 2 gr, 1 sp, 2 gr, 6 sp, 3 ch sts, 1 s c, 3 ch sts, 2 d c, 3 ch sts, turn,

5th row—1 d c, 5 ch sts, 6 sp, 2 gr, 1 sp, 2 gr, 7 sp, 5 ch sts, turn,

6th row—4 sp, 3 gr, 1 sp, 1 gr, 1 sp, 1 gr, 1 sp, 3 gr, 3 sp, 3 ch sts, 1 s c, 3 ch sts, 2 d c, 3 ch sts, turn,

7th row—1 d c, 5 ch sts, 1 d c, 4 sp, 3 gr, 3 sp, 3 gr, 5 sp, 5 ch sts, turn,

8th row—9 sp, 1 gr, 8 sp, 3 ch sts, 1 s c, 3 ch sts, 2 d c, 3 ch sts, turn, this completes the center row of star,

9th row—Repeat 7th row, and continue repeating backward until you have completed the figure, then make 3 rows of sp, with the beading and edge on one side. Continue for the length required over the shoulder. 5 ch sts, turn.

Using the end sts of the last 15 rows as a foundation, make first row of the back: 5 sp, 1 gr, 3 sp, 1 gr, 5 sp, 5 ch sts, turn, continue as before, only omitting the beading and edge. Continue for the length required across the yoke, exclusive of the opposite shoulder band. This completes half the yoke, repeat for the remaining portion and sew together as shown in the illustration.

For the beading around the neck, make 7 ch sts, * thread twice over hook, insert hook into top of row, draw thread through, thread over hook, through 2 loops, thread over hook, skip 1 sp, insert hook into top of next row, draw thread through, thread over hook, through 2 loops, 1 d c, 2 ch sts, insert hook into 2 sts, at the joining of the 2 sections, make 1 d c, 3 ch sts, skip 2 sps, repeat *, this st is know as cross treble, c t, and forms a very satisfactory wide beading.

For the scallop, * 1 s c, over ch of c t, 3 d c, 3 ch sts, form 1 p, 2 d c, 1 p, 2 d c, 1 p, 3 d c, all over ch of next c t, repeat * for this row, break thread.

For the lower edge, make 1 row of sp.

Next row: * 1 s c over sp, 3 d c, 3 ch sts, 3 d c, over next sp, repeat *, making 9 d c, at each corner. The thread may be broken off here, or one row of d c, may be continued around the armholes, if desired. No. 1½ wash ribbon is used around the armholes and across the bottom of the yoke, with No. 2 ribbon to match around the neck.

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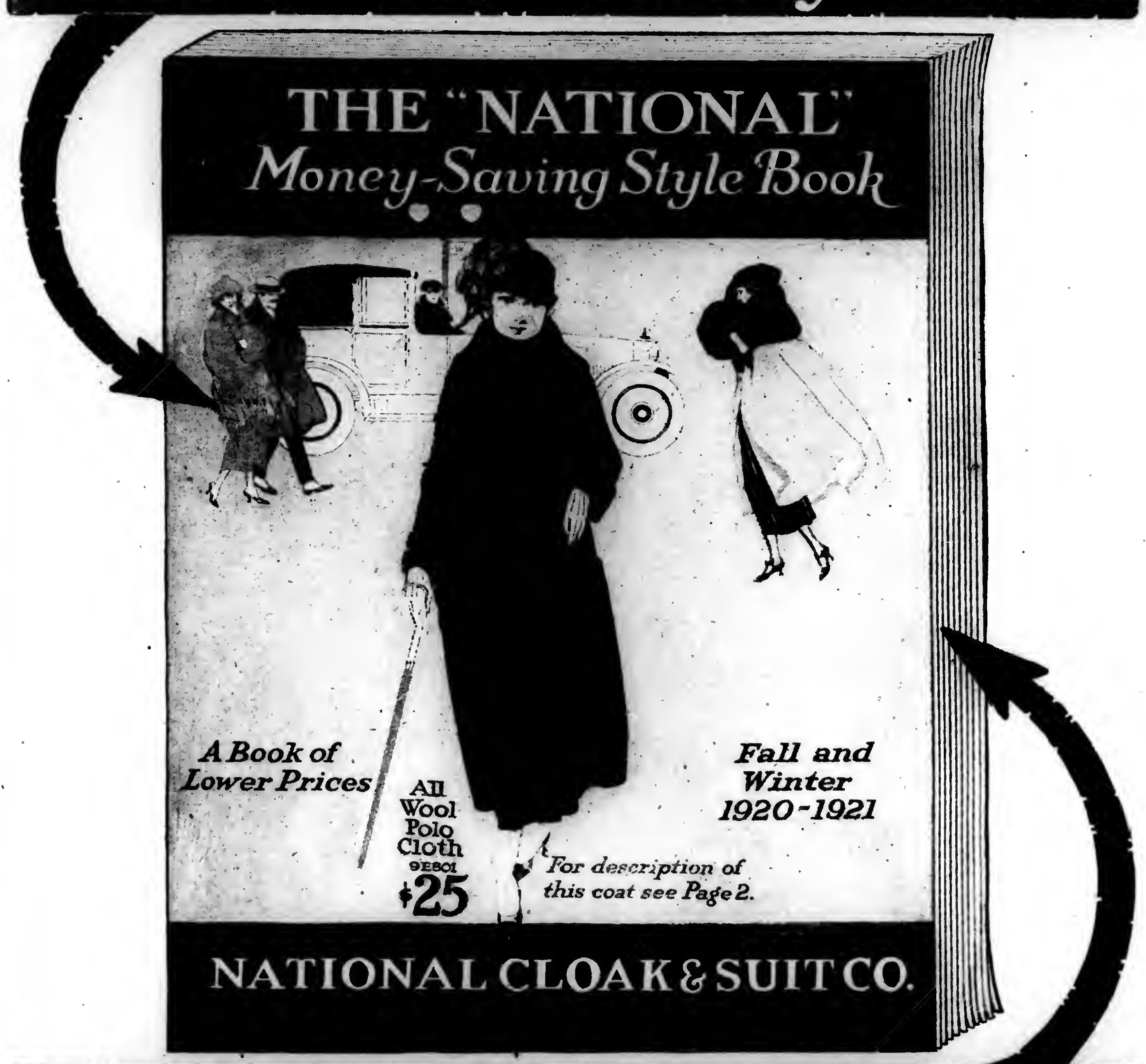
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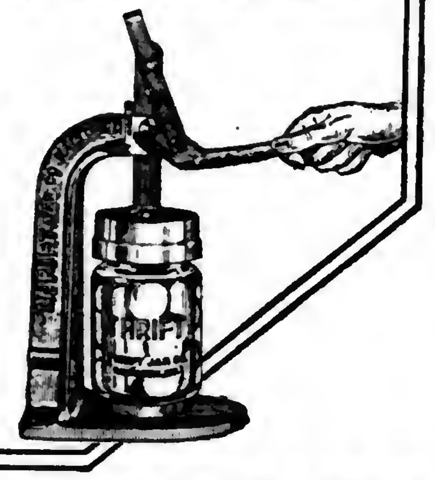

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HAVE ANY TROUBLE WITH JELLY MAKING?

These Suggestions May Help

The other day a housekeeper called up and said that for the first time in her life her currant jelly would not jell, altho she made it just as she always had. It was evident that the currants were too ripe, and that there was not enough of the fruit gelatin nor of acid in them to get the usual results.

Fruit gelatin, called pectin, which is one of the essential factors in jelly making, is most abundant in fruit that is a bit under-ripe. You know that green apples and green grapes are pretty reliable jellymakers. When the fruit gets too ripe, this pectin seems to change into something else that will not "jell."

Also a certain amount of acid is necessary to co-operate with the pectin in jellymaking. Hence the juice of some fruits which contain enough pectin but not enough acid, such as pears, will not jelly. And on the other hand, some fruits contain enough acid but not enough pectin, such as strawberries, pineapples, cherries, peaches and rhubarb. The fruits that at the right stage contain pectin and acid in correct proportion for reliable jellymaking are: Apples, currants, crabapples, raspberries, blackberries, grapes, gooseberries, oranges, lemons, plums. Quinces contain a good deal of pectin, and juice will jelly if the fruit is sufficiently under-ripe to furnish the proper proportion of acid, but ripe quince juice will refuse to make nice jelly unless it has some apple or lemon or orange or other acid juice added.

The amount of water in proportion to the pectin in the juice is also important; too much water will make the juice so thin that it will not jelly. Sometimes when your jelly has been thin, and you have let it set in the sun awhile, it has eventually solidified enough so you could pour paraffin onto it, and the result has been a fair texture of jelly. This is because the excess water has evaporated until the proportion is right for the amount of pectin and acid.

How Much Water to Use

There is no advantage in using so much water in cooking the fruit that it must be evaporated out in boiling until there is the right amount for the pectin. On the contrary, use only enough water to keep the fruit from scorching while cooking to soften it so that the juice be extracted. The rule is: One pound or one pint of water per each four pounds or four pints of soft fruits such as currants, grapes and berries; and one pound or one pint of water per each pound or pint of harder fruits like apples or quinces. Sometimes, if the season has been a very wet one, and the fruits are very juicy, even less is safer.

Effect of Too Much Boiling

Boiling the jelly juice too long is apt to destroy the pectin, therefore it is best to use only just enough water, as above indicated, and then heat the juice only long enough to thoroly dissolve the sugar.

How to Test for Pectin

Put a tablespoonful of the cooked and cooled juice in a tumbler, and pour in a tablespoonful of grain alcohol. The alcohol will precipitate the pectin, if there is any therein, in the form of little lumps of jelly-like substance. If you can gather up with a spoon these lumps in a little ball, you have pectin enough for jelly making. Try this with some green grape or under-ripe apple juice, and you will get a good idea of how much pectin to look for in a good jelly juice. You have to use cooked fruit juice, because the pectin acts just like starch in that it has to be cooked in order to gather together in a jelly mass. And the juice must be cooled before you put in the alcohol.

Amount of Sugar

If your jelly test shows as much pectin as in apple or currant juice at the right stage of ripeness, or rather, under-ripeness, that amount of pectin will take care of and require quantity for quantity of sugar and juice, that is pound for pound, or cup for cup of sugar and juice. With less pectin, use only three-fourths as much sugar as jelly juice. When there is not enough pectin to form a ball but enough to show some lumps in the bottom of the glass, use only half as much sugar as juice. Too much sugar for the pectin makes the jelly too grainy. And of course if there is not enough pectin to make the juice jelly at all, don't waste time and sugar by putting sugar in.

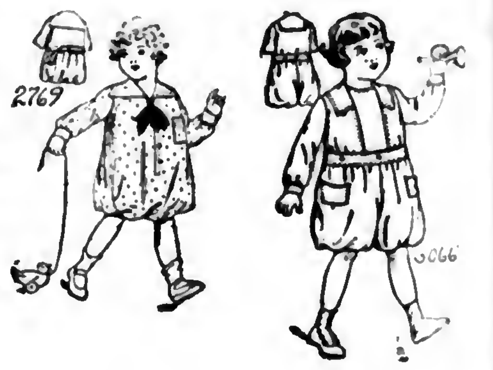
Why Not Use a Jelly Thermometer?

A letter has just come from a farmers' wife telling how she saves time and temper by using a thermometer. She uses a common Fahrenheit thermometer with a wooden back, and hangs it in the juice from the handle of her warming oven. When the juice reaches 218 degrees, it is cooked enough, according to her experience. She puts in the warmed sugar when the juice reaches 210 degrees.

With a regular candy thermometer, which has the Centigrade scale, one would bring the juice to 101 degrees, then add the sugar, and boil until 103 degrees, and take off immediately and pour into the jelly jars. For such fruits as peaches or strawberries, which do not jelly unless combined with jellying juice, such as apple or currant or grape, one should cook the juice until 105 or 110 degrees, according to how stiff you want it. But even when you use a thermometer, it is safest to test your juice with the alcohol to determine how much jellying ability it has, and to tell you how much sugar to use.—Harriet Mason.

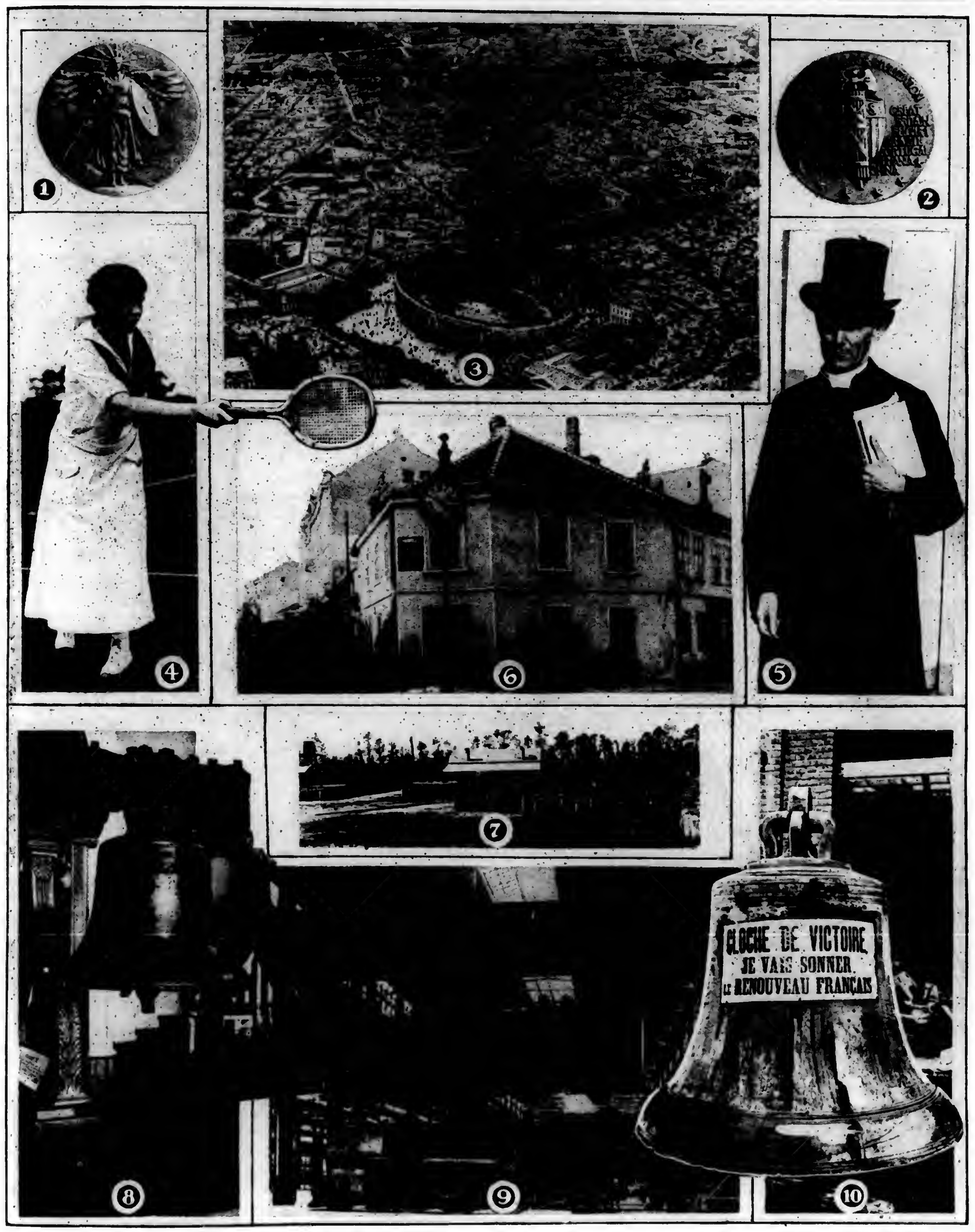
GOOD ROMPER DESIGNS

2769.—Front of waist and bloomers are cut in one, but the back is in two pieces. The sleeve may be finished at wrist length with a band cuff, or short, in loose style. Pattern is cut in 4 sizes: 1, 2, 3 and 4 years. Size 4 requires 3 yards of 36-inch material. Pattern, 10 cents.



3066.—The pants are buttoned to the waist, which closes at the left side of the vest. The garment may be finished with wrist length or elbow sleeves. Pattern is cut in 4 sizes: 2, 3, 4 and 5 years. Size 4 will require 2¼ yards of 36-inch material. Pattern, 10 cents.

PASSING EVENTS IN PICTURES



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1, 2—The Victory Medal now being manufactured and distributed to all U. S. Service Men.

3—Aerial view of Nimes, France, showing bull fight in the Arena.

4—Miss Virginia Travell, sensational Wellesley College star, now playing in Metropolitan tournament.

5—Archbishop Daniel Mannix, of Australia, who is visiting the United States.

6—Cafe in Belgrade, Serbia, where plot to assassinate the Archduke of Austria was hatched, which started the World War.

7—Rosin awaiting distillation into turpentine at a southern mill.

8—Liberty Bell in Independence Hall, Philadelphia.

9—In the Repair Shops Locomotives are handled like toys.

10—First bell made at Donai, France, since the war. It says: "The Bell of Victory. I am to sound the Rejuvenation of France."

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HORTICULTURE

Equipment For Shipping Apples

By J. P. Stewart

In a recent article we discussed the principal points to be considered in the harvesting of early fruit, and carried the operations for any kind of fruit practically up to the packing. In the present discussion, we shall consider some of the more important equipment needed in the latter process. Incidentally, it should be remembered that the ultimate value of the fruit on the market is likely to depend fully as much on the way it is graded and packed, as on any other feature.

The extent and character of the equipment needed for grading and packing apples naturally depends on the size of the crop, the general location of the orchard, and the character of the output, i. e., whether the fruit is to be put out in barrels or boxes. Since the barrel is the principal package thruout most of the eastern states, however, and since practically as good and sometimes better prices are obtainable for fruit properly packed in it, our attention will be confined to it for the present.

Clean Culture in Vineyard in Western New York

Where the orchards are small and the weather favorable, very satisfactory results can be obtained with a very simple portable equipment consisting of a barrel press and a simple grading table. Such an equipment should be sufficient to handle any crop up to five or six cars, if the ripening period of the fruit involved is not too short. If the laboring force is limited, the best results can usually be obtained by picking a considerable part of the fruit before starting the packing, and placing it in barrels or crates for temporary storage under cover. If the regular apple barrels are used for this, it is well to place the head of each barrel in the bottom of its barrel before the fruit is put in, and the fruit is best left uncovered in any event, in the interests of cooling and ventilation, which are very important at this stage of the process.

Unless the weather is unusually cool, however, no fruit intended for keeping should be left longer than is absolutely necessary in the temporary storage, and wherever possible, one should plan to get his fruit either shipped or into cold storage within four or five days after it is picked, and the more this period is reduced the better.

Grading Tables

The common types of grading tables used for such packing as that just named are the so-called apron table and the canvas or burlap table. The former is most widely used. It is the common sloping table—with slatter bed to get rid of the trash, which permits the fruit to roll to the lower end as it is graded, and from this point it is lowered into the barrel with the aid of an apron.

In using this table, where two or more grades and sizes are packed, the culls and second grade fruit are sorted out and put aside, for attention later, and the size of fruit which forms the smallest proportion of that remaining is also sorted out and placed in its barrels. The remainder, which should constitute much the largest portion of the fruit, is run over the table into the barrel. The man at the barrel is usually held responsible for the maintenance of the grade and checks up the work of his crew by additional sorting as the fruit goes over the end of the table.

The chief advantage of this table is in the speed which it affords. It is not easy to put out a high-grade pack with it, unless the fruit as a whole is of comparatively high quality. The sorting has to be done as the fruit is pushed and rolled toward the end of the table, and this often interferes with thorough inspection, especially when the table is kept very full. The sizing also has to be done by hand so far as it is accomplished at all, and this is not always as satisfactory as is desirable. In spite of all these difficulties, however, the writer has seen some very good fruit packed in this way, and has put out several hundred barrels himself which apparently met all requirements.

The canvas or burlap table differs in the fact that it does not slope, and is made by stretching canvas or burlap over a rectangular frame. With it, each apple must be picked up before being placed in baskets, with which they are lowered into the barrels. This naturally affords an opportunity for more careful inspection, and hence should result in a better pack. When as much as half of the fruit must be sorted out on the apron table, the present table is supposed to do the work as rapidly and considerably more accurately than the former. With either type of table, however, great care must be exercised to avoid bruising, and get the quality of pack desired.

Sizing Machines

The recent legal and marketing requirements, which call for a statement of the actual minimum sizes of the apples in all closed packages, have greatly stimulated the use of definite sizing machines, wherever the amount of fruit to be packed will justify their purchase or employment. Such machines have been in use for several years in the box-packing sections, where those that size by weight are generally most popular. This style of machine is usually too complicated and of too small capacity, however, for satisfactory use in the barreled-fruit sections.

In the latter sections, the machines used generally consist of two parts, canvas conveyors on which the fruit is sorted, and the sizing portion proper. The fruit is delivered to the conveyor as it comes from the orchard, and is sorted as it moves toward the sizer. The style of machine which is probably most popular in the latter section, is one in which the sizing is accomplished by means of endless chain belts, composed of rings of the sizes desired. Two to four of these belts are used, depending on the number of sizes desired, and they are arranged in series so that the fruit is carried from the smallest to the largest rings. The belt is expected to eliminate all the undersized fruit, and is therefore usually composed of rings 2¼ inches in diameter. This might need some modification, however, in case of some of the smaller varieties, such as Jonathan and the old Winesap.

There are various other types, one of the best of them involving a series of cups or pockets which gradually enlarge as the fruit is carried along, and still others involving rollers and slots and spirals, as the case may be, which also gradually enlarge their openings as the fruit moves along. In all cases, however, one should be sure that the machine selected has the following characteristics. First, sufficient capacity for his orchard; second, simplicity in design and construction, and without too numerous adjustments; and third, freedom from any tendency to bruise or puncture the fruit. The machine chosen should also be substantially constructed, so that it will stand the rough usage that is generally encountered.

Other points worth considering in this connection are the possibility of dividing the sizing apparatus lengthwise so as to permit the sizing of more than one grade of fruit, the opportunity for efficient disposal of culls, the method of feeding the fruit so as to provide a continuous flow of fruit to the sizer, but without any tendency to crowd or bruise, and also to avoid unnecessary lifting of the fruit. The latter is probably best accomplished by having the receiving platform or floor about 30 inches above the main packing floor, and then installing a two-foot feed belt about 10 to 20 feet long, to catch the fruit. It is well also to have this feed belt elevated about 18 inches above the receiving platform, to facilitate emptying the barrels or crates. The best position for this feed belt is to have it run along the receiving platform of the packing house, at right angles to the grading belt, which enables one to empty the picked fruit at any point along the line.

Instead of the feed belt, some growers use a hopper on the floor level, from which the fruit is carried to the grader by means of an elevator belt. This arrangement is much more likely to bruise the fruit, and its capacity is also materially less for the same speed and width of belt. When used, it should always be properly padded.

YORK CO., PA., FRUIT GROWERS' TOUR

The York Co. Fruit Growers' Association conducted a tour of inspection thru the county on Tuesday, August 10th. This is a new organization, having been started last April with a membership of 44. The trip was intended not only to get an opportunity to view some of our countys' best orchards, but also to increase the membership and interest in the organization. Our County Agent G. G. Weber, and Prof. Nixon were at the head and did the planning as well as the lecturing on the trip.

The party left the Court House at 8.20 and went east on the Lincoln way to the orchards of Eli Kauffman & Sons. About an hour was spent in going thru the orchards and inspecting the trees, fruit, etc. Prof. Nixon took some time to go into the detail of the cause and treatment of collar rot which was found on a few trees. There also was a spraying demonstration plat for scab. Prof. Nixon gives positive assurance that anyone who will put the pink spray on will have no scab troubles.

The party returned to York and started north on the Susquehanna Trail near Manchester to the orchard of E. S. Hykes. Here methods of orchard work were much different, most of the trees being in permanent sod. The set of fruit was very light compared with the orchards just left. Blister canker, leaf hopper, and spray burn were illustrated in this orchard. From here the growers returned thru York to the orchards of Mr. Schmidt, on whose ground a tablet was placed to the credit of the York Imperial apple on August 18 by the State Horticultural Association. It is claimed that here the original tree grew, from which the propagation was started.

The different members of the party had provided their own lunch, which was eaten in the grove at this place. Later, talks were given by Prof. Nixon and Mr. Weber. Also a drive was made for new members, the results of which will be given, together with other information about the association, in a later item. After passing thru these well kept orchards the trip was continued towards Stewartstown. In going from York to Dallastown and Red Lion, one passes by some of the most up-to-date farms that can be found in any farming community.

Prof. Nixon is a great potato enthusiast and took time to stop at one of the fields on the way to explain the benefit of spraying. The trip was continued until we came to the orchards of H. W. Anderson, probably the largest grower in the county. A little time was taken to explain the method of making self-boiled lime-sulfur, and its economy for the aevrage grower. About this time a heavy thunderstorm came up and all were glad to get under shelter. A downpour of an hour made it impossible to get out into the orchards and the trip ended.—Clayton F. Weaver.

PLANNING TO CARE FOR NEW YORK FRUIT CROP

None of New York's good fruit crop will go to waste if the fruit growers, the farm bureaus and other agricultural agencies of the state can put into operation the plans they are making to facilitate its packing, shipping and marketing.

Representatives of the fruit growers in all parts of the state have met with those of the marketing and transportation committee of the state federation of farm bureaus and have outlined a plan of action, the preliminries of which are now being carried out.

The plan provides that the central farm bureau organization shall assist fruit growers in three ways. It will obtain from growers, thru local farm bureaus, information concerning the costs of producing apples, the prices growers are willing to pay for picking, and facts about the storage and barrel situations. Information from each county will be correlated with that from others, and the whole will be summarized and sent back to be distributed by the local farm bureaus which have co-operated, for the use of growers in deciding how best to handle their crops.

News Service Planned

The central office also plans to prepare during the marketing season a weekly market news service for apples and pears. This will be sent to growers through local farm bureaus. It will be a summary of reports from the counties interested covering prices fruit crops are bringing, together with telegraph and mail reports from other states. This service is to be sent to every county farm bureau office which co-operates, and from there relayed by mail or telephone to individual growers.

In addition to this help to the growers directly, the federation is planning to keep the railroads informed as to the number of cars needed to move the fruit and vegetable crops of the state to market.

A conference is being arranged likewise between representatives of the federation and those of the Federal car service commission and Interstate Commerce Commission for a like purpose.

Agrigraphs

One way to make country life more attractive is to beautify the farm both indoors and out. It's the outdoors we think most about in summer; flowers and shrubs help.

* * *

The boy or girl who is not a member of a junior project club is likely to be lonesome. Are your boys and girls missing out on fun and instruction to which they are entitled?

* * *

Sings a nameless poet: The old hen sat in a leafless tree and said "Nobody cares for me. My food is what I find about, I hunt for it till I'm frazzled out. My owner says I do not pay, and that I ought to sing and lay. I wish he had to sit out here and live on pickin's all the year, I'll bet a half a cent, by jing, he wouldn't lay from now till spring."

Spark Plugs and Silo-Filling

WHEN you've got your tractor hitched up to the silage-cutter, you don't want any shutdowns on account of poor spark plugs. *Therefore*—use Bethlehems!

Bethlehem Spark Plugs don't go dead like ordinary tractor plugs. The mica in the Bethlehem de Luxe Tractor Plug is wrapped around a center spindle, then reinforced in little mica washers, compressed into a granite-like whole. Built for hard service.

The great International Harvester Company, after exhaustive tests, has adopted Bethlehem Spark Plugs as standard equipment.

Bethlehem Automobile and Truck Plugs are as dependable as the famous Tractor Plugs. Studebaker, Marmon and 48 other manufacturers equip with Bethlehem Plugs. Write for your free copy of "Hit or Miss?", which tells you what you want to know about spark plugs.

BETHLEHEM SPARK PLUG CORPORATION
E. H. Schwab, *President*
Bethlehem, Pa.

Bethlehem SPARK PLUGS
"They Pull You Through"

Hoffman's Seed Wheat *11 Hardy Varieties*
Closely Graded Priced Right

YOU SHOULD SOW Hoffman's Seed Wheat this fall — IT WILL PAY! COSTS LITTLE to change. If you get only ½ bushel to 1 bushel more wheat per acre, your investment pays for itself! But you will likely get 5 bushels more. Many customers reported 10-bushel increases—some still higher.

Better Wheat and More of it — results from Hoffman's Seed. Only reliable sorts are sold. Varieties that *yield more per acre and require less seed.* Hardiest and most prolific types known. Produced on the fertile wheat soils of Lancaster County, Pa., where winter wheat does its best. Cleaned to perfection—closely graded—sound. —*Free from cockle, rye, garlic, smut, cheat, disease.*

TERMS—SEED WHEAT MUST BE SATISFACTORY. IF IT DOES NOT PLEASE YOU, RETURN IT — WE'LL REFUND YOUR MONEY AND PAY ALL FREIGHT.

"Leap's Prolific"—leading variety (head shown at right) yielded 35 to 42 bushels per acre. Grows tall, stiff straw—long, white, smooth heads. Fills out well, does not shatter. Long berry, hard, mills well. Very dependable kind to sow.

Alfalfa Seed—"Northwest" brand—Idaho-grown seed—99.80% pure—highest germination. Hardiest strain of seed you can buy — means successful stands. "Extra" brand—Kansas-grown seed—also of high test. Alfalfa Seed Samples and special booklet "How to Grow Alfalfa," *FREE.* Order early as our stock of Alfalfa Seed is limited.

Timothy Seed—Hoffman's "Farmer's Choice" brand Timothy Seed is the cleanest and soundest seed you can buy—tests 99½ to 99¾% pure. Germination almost perfect. Make your own tests if you wish—return seed if not satisfied. Samples Free.

Seed Wheat Catalog and Samples Sent Free
You will profit by investigating Hoffman's Seed Wheat. Learn about these 11 wheats — some are bearded, others beardless — all profitable kinds to sow. Send for this catalog today—it is free. Tell us you saw this ad in the Pennsylvania Farmer.

A. H. HOFFMAN, Inc., LANDISVILLE, LANCASTER COUNTY, PA.

SEED WHEAT Leap's Prolific smooth wheat yields 40 bushels per acre. Seed may be had for $3.00 per bushel.
W. O. GERHARD,
Weatherly, Pa.

SEED WHEAT [illegible] very prolific will yield 35 to 50 bushel per acre. [illegible] bushel. Order at once direct from growers.
LENZ & PARKHURST, Ulster, Pa

Markets

PHILADELPHIA PRODUCE

—Aug. 23, 1920.

The tendency of nearly all kinds of vegetables during the past week has been downward. Penn. and N. J. are in the flush of the season. Warm and wet weather conditions would not permit holding, so the produce had to be marketed promptly. Green beans are in moderate supply, but not many of them are fancy enough to bring top market price, which at this writing ranges from 25c@$1 per ⅝ basket. Wax beans are selling from 35c@$1, per basket with most beans too poor to exceed 75@80c per basket.

Beets are practically unchanged from last week at 1½@2½c per bunch, with loose hamper beets at 40@65c per hamper. Cabbage after ruling extremely low is at last showing signs of improvement and is now selling at 15@30c per ⅝ basket, and in barrels at 75c@$1.15 including the price of the barrel. Carrots remain unchanged at 1½@3c per bch., or 40@75c per ⅝ basket. Celery is rather dull and draggy, but prices remain unchanged at 25@65c per bunch, with extra fancy, large at 75c.

Celery hearts are selling from 3@7c per bunch. Corn is down to about its lowest point for the season as ⅝ baskets sell from 25@65c, and the loose Penn. corn at 75c@$1.50 per 100 ears. Cucumbers reached their lowest point a few days back, and are beginning to react. Prices are gradually advancing, best N. J. cucumbers selling at 50@85c per ⅝ basket, and the small pickling cucumbers from 75c@$1.25 per ⅝ basket. Eggplants are plentiful and have reached the low price of 15@25c per ⅝ basket.

Lettuce is plentiful and selling from 65c@$1.50 per box of 2 dozen heads, with the hpr. lettuce at 60c@$1 per hpr. Lima beans also appear to have touched their low point last week, and are a little firmer at $1@1.40 per ⅝ basket and $1.50@2 per bu. hpr. Okra is selling at 50@80c per ⅝ basket. Onions are showing little or no change, most onions selling at 50c per ⅝ basket, with some a little higher and some 5@10c per basket less. The white onions for pickling purposes are selling up to $2.50@3 per hpr., with the larger white onions at $1.50@2 per hamper.

Peas are rather scarce, but a car from N. Y. sold at $2 per bushel for best with poor down to as low as 50@75c. Peppers are selling rather low best selling around 30@35c per ⅝ basket with most sales around 20@25c per basket. Romaine is in moderate supply and firm at $1@1.50 per box. Squash is not so plentiful as it has been and will do better. White squash is selling at 15@30c per ⅝ basket and the green Italian squash at 15@40c per ⅝ basket. The rainy and warm weather has been hard on the tomato market and low prices prevail. With the later crop coming on, and with better weather conditions, the market should do better. Early tomatoes are selling at 30@60c per ⅝ basket and late tomatoes at 50c@$1 per ⅝ basket.

The potato market appears to be a little firmer than it was a week ago. Best Eastern Shore barrel stock is selling at $4@4.50 per barrel, with unbranded stock at $3.50 per barrel, and the culls at $1.25@2 per barrel. A few N. J. potatoes are being sold in 150 lbs. sacks at $4 per sack for the cobblers and $3.25 per sack for the giants, while the No. 2 potatoes sell around $2@2.25 per sack.

Sweet potatoes have declined during the past few days, but they are still bringing a fair price. Jersey sweet potatoes are selling at $2@2.25 per ⅝ basket, with No. 2s and culls at 75c@$1.25 per basket. A few yellow turnips are being sold at 35@60c per ⅝ basket, but the trading on them is far from being active.

Fruits.—There are plenty of apples on the market, there being supplies coming from N. J., Penn., Vir., Del.; and N. Y. Penn. apples sold at $1.25@1.75 per hpr. One car of N. Y. apples sold at $3.75@4 per barrel, with some bus. at $1.25@1.50. N. J. apples are the predominating factor and these are selling at 60c@$1.25 per ⅝ basket no No 1s, with No. 2s at 40@65c, and culls or poor windfalls at 25@35c per bsk.

The market is fairly well supplied with peaches, with the N. J. peaches predominating, altho supplies are also coming from Del., Md., Vir., Penn. with a few still coming from N. C. The N. J. peaches are gradually improving in price as the later and better varieties of peaches are now arriving. Best N. J. peaches are selling at $1.50@2 per ⅝ basket with fair to good at 75c@$1.25 per basket, while others are of such poor quality as to sell as low as 25c per basket. A car of Delaware peaches here this morning sold at $2.50@4 per bus. Penn. peaches sell at about the same price as the N. J. peaches.

N. J. is also in the lead in supplying cantaloupes. The pink meated cantaloupes sold at 35@90c per ⅝ basket, and the green meat cantaloupes at 25@60c per ⅝ basket. Some grapes are coming from Del. and selling at $1.75@2.25 per ⅝ basket carrier, with the small pony baskets at 20@25c per basket. N. J. is shipping a few grapes, but they are not as good quality as the Del. grapes, altho they are improving.

One car of N. Y. plums sold here this morning at $1.75@2 per bus., but they were a little ripe, and strictly fancy would probably have brought $2.25@2.50 per bu. Most of the watermelons are now coming from Md. and Del., and selling mostly at $25@50 per hundred, with a few making their appearance from N. J. The season on berries is nearly over. A few huckleberries sold from 12@23c per quart, being for the most part in very poor condition. Some blackberries sold at 20@26c per quart.

Poultry.—The market has had a downward tendency on live poultry since our last week's report, especially on broiling chickens which are several cents lower than they were a week ago. At this writing fancy heavy fowls are selling at 30@38c per lb., with the lighter and medium sized fowls at 23@35c per lb. Leghorn fowls are selling at 33@34c per lb. Old roosters are lower at 21@22c per lb. Broiling chickens which were bringing close to 50c lb. last week have taken a decided drop, and broilers not leghorns are selling at 34@39c lb., with the leghorn broilers weak at 33@35c lb. Spring ducks remain practically unchanged at 30@33c lb.

Eggs.—The tendency of the egg market has been upwards, and is now ruling firm at about the following prices: Penn. and other nearby current receipts 52c, nearby firsts, 54@56c, ordinary to fair 48@50c; fancy selected and candled nearby eggs 64@65c, western firsts, 50@53c, western extra firsts 54@56c, seconds and poorer 30@48c per dozen.

LANCASTER PRODUCE

—Aug. 23, 1920.

The largest number of farmers to attend market in the history of the city were on hand today despite continued rains. Cantaloupes flooded the market and sold as low as a nickel each. Corn was also a drug. Eggs dropped five cents during the trading hours. Peas were extremely scarce and were of poor quality. Apples of all grades were offered in large quantities. The quotations:

Butter and Eggs.—Fresh eggs, 55@60c per dozen; country butter, 65@70c per lb.; creamery butter, 68@72c per lb.

Poultry.—Dressed fowls, $1.25@2.25 each; broilers, 75c@$1 each; squabs, 30@50c each.

Vegetables.—Green beans, 15c per half pk.; yellow wax beans, 20c per hf. pk.; lima beans, 20@25c per qt.; beets, 5@10c per bunch; cauliflower, 15@30c per head; corn, 15@25c per dozen; celery, 10@15c per stalk; eggplants, 15@20c each; lettuce, 15@20c per head; peas, 40@50c per half peck; potatoes, 30@35c per half peck; do., $2 per bu.; sweet potatoes, 40@45c per half peck; spinach, 10@15c per hf. pk.; tomatoes, 20c per hf. pk.; turnips, 40c per hf. pk.; rhubarb, 10c per bunch.

Fruits.—Apples, 20@30c per hf. peck; blackberries, 25@30c per qt.; cantaloupes, 5@15c each; elderberries, 15@18c per qt.; pears, 20@30c per hf. pk.; peaches, 15@20c per qt., watermelons, 30@60c each.

YORK PRODUCE MARKETS

—Aug. 23, 1920.

The long-looked-for rains have come at last. It has been raining for 16 days and promises another today. Just what effect this will have on the produce situation, is hard to say. For two weeks York has been suffering the same as many other cities from an over supply of perishable products. Selected tomatoes, 50c bu.; lima beans, 10c qt.; apples, 10c ½ pk.; potatoes, $1.25 bu.; and so on. It is hard to see how this large supply can develop with the scarcity of farm help; yet it is just possible that it comes thru the larger farmers raising more of this by means of machinery instead of growing the grains and hay. This would account for the shortage of hay and grain with the attendant high prices and the surplus of truck products. Some of us were wise enough to plan for our own feed to be raised at home and cut out some truck crops, and the outcome is proving that the reasoning was good.

Eggs.—48@50c per dozen.

Butter.—Country, 60@65c lb.; separaor, 55@75c lb.; milk, 14c quart.

Poultry.—Hens, 28@30c lb.; springers, 33c lb.; dressed, $1@2.50 each.

Vegetables.—Potatoes, 20@35c ½ pk.; $1.25@1.50 bu.; lettuce, 10c hd.; cabbage, 5@10c hd.; beets, 5c bch.; onions, 6c bch.; 10c bx.; 25c ½ pk.; radishes, 6c bch.; lima beans, 10@20c qt.; green beans, 12@15c ½ pk.; peas, 50@60c ½ pk.; corn, 30@50c doz.; egg plants, 5@25c each; peppers, 10@15c doz.; cucumbers, 75c@$1.40 per 100.

Fruit.—Apples, 10@40c ½ pk.; plums, 8@25c bx.; pears, 5@10c bx.; peaches, 10@15c bx.; 30c ½ pk.; $2 per basket; blackberries, 20@25c bx.; tomatoes, 5@8c bx. 10@25c ½ pk.

Retail Grain Market.—Wheat, $3; corn, $2; oats, $1; rye, $1.75; bran, $3.25 cwt.; middlings, $3.75@4.50 cwt.

Wholesale Grain Market.—Wheat, $2.45; corn, $1.58; oats, 75c; rye, $1.45; bran, $50 per ton; middlings, $65 per ton.

NEW YORK PRODUCE

—Aug. 23, 1920.

Butter.—Firm; receipts, 6,700 tubs; creamery, higher than extras, 57@57½c; creamery, extras (92 score), 56½c; creamery, firsts, (88 to 91 score), 51½@56c; packing stock, current make, No. 1, 43@44c.

Eggs.—Firm; receipts, 10,366 cases; fresh gathered, extra firsts, 56@57c; fresh gathered, firsts, 50@54c; state, Pennsylvania and nearby western hennery white, firsts to extras, 62@73c; State, Pennsylvania and nearby western hennery browns, extras, 62@66c; state, Pennsylvania and nearby gathered browns and mixed colors, extras, 50@60c.

Cheese.—Firm; receipts, 3,151 boxes; state, whole milk, flats, current make, white and colored special, 28@28½c; do, average run 26@27c; state whole milk, twins, current make, specials, 27½c; do., average run, 26@27c.

Live Poultry.—Steady; broilers, by freight, 32@38c; by express, 35@42c; fowls, 35@36c; old roosters, 25c; turkeys, 35c.

Dressed Poultry.—Firm; western broilers, fresh, 43@56c; fowls, fresh, 27@42c; roosters, fresh, 26@27c.

Vegetables.—Potatoes, bbl., L. I., bbl., $3.50@4.50; J'y., 165-lb., $3.50@4.50; J'y, 150-lb. $3@3.75. Sweets, bskt.—Jersey, 1s, $3@4. Beans, bskt.—Wax, 50c@$2 Green, 50c@$2. Beets, N'by, bbl., $2@2.50. Carrots, n'by, 100, $1@2. Corn, J'y., 100, $1@3. Cucumbers, State, bsk., $1@2.50. Cabbages, L. I., bbl., 50c@$1; J'y., bts., 50c@$1. Eggplants, J'y, box, 50@75c. Leeks.—N'by, 100, $1@3; Lima beans, J'y, bsk. 75c@$2.25. Lettuce, State, crt., 75c@$1.75; N'by, bbl., $1@2. Okra, J'y., crt., $2@3. Onions, state, Wh., bsk., $1.50@2; Yel., bsk., $1.25@1.50; Jersey— Wh., bsk., $1@1.75; Yel., bsk., $1@1.50. Peppers, Jersey bbl., Bull nose, $2@2.50. Peas, state, bsk., 50c@$2; L. I., bag, 50c@$1.25; J'y, bsk., 50c@$1.25; Romaine, N'by, bbl., 75c@$1.50; State, crt., 50c@$1. Squash, Wh., bbl., $1@2; Yel., bbl., $1@2; Turnips, White, bbl., $1.50@3.50 Rutabaga, bbl., $1.25@1.75. Tomatoes, Up-J'y, box, 50c@$2; So. J'y, Acme, 50@$1.25; Stone, 50c@$1; Grant, 25@75c; J'y., 12-qt. bskt., 20@40c; J'y, carrier, 50c@$1.25.

PITTSBURGH PRODUCE

—Aug. 23, 1920.

Butter and Cheese.—Prints, 61½@62c; Tubs, 61@61½c; Cooking, 45@48c; Ohio, 56½@57½c; cheese, N. Y. full cream, 33@35c; Wis. Swiss, 58@60c; Swiss, 3-lb. block, 39@40c; Phila., cream, doz., $1.

Eggs.—Fresh select, 51@52c; Specials, at mark, 48@49c; Current receipts, 46@47c; Do., candled, 49@50c.

Produce.—Potatoes, Jersey Cobblers, 150-lb. sk., $3.75@4. Beans, wax, and green, hamper, $1@1.25; do lima, hamper, $2@2.25. Onions, do. h. g. 100-lb., sack, $3.25@3.50. Cabbage, h. g., bushel, 40@50c. Lettuce, h. g. box, $1@1.75; do., head bx., $1.25@1.75; Turnips, bu., $2.25@2.50. Green corn, h. g. bushel, $1.75@2.25. Parsley, dozen, 50c. Tomatoes, do., h. g., basket, 50@60c Cucumbers, N. C. hamper, 75c@$1. Carrots, new, dozen, 35@40c; Beets, new, dozen, 35@40c; Celery, bunch, 25@50c; Peppers, hamper, 75c@$1; do., bbl., $2@2.50.

BALTIMORE PRODUCE

—Aug. 23, 1920.

Butter.—Prices are steady on good table grades and also on packing stock and choice rolls. Quote, per pound: Creamery, fancy, 58c; choice, 56@57c; good, 55@56; prints, 58@60c; blocks, 57@59c; Ladles, 43@44c; Md. and Pa. rolls, 38@40; Storepacked, 36@37c; Md., Va. and Pa. Dairy prints, 38@40c; Process butter, 51@53c.

Eggs.—Prices are firmly held on newly laid nearby eggs, receipts of which are light with the demand from day to day largely supplied by Western and Southern eggs.

Quote, per dozen:

Md., Pa., and nearby firsts, 50c; Western firsts, 48@49c; West Virginia firsts, 48@49c; Southern firsts, 47@48c.

Live Poultry.—Choice large spring chickens move fairly well, but undersized and White Leghorns receive indifferent attention. Heavy fat old hens fairly firm. Ducks inactive. Inquiry for large guinea fowl and receipts are light. Quote, per pound:

Chickens, old hens, 4 lbs. and over, 37c; small to medium, 35@36c; White Leghorns, 34@35c old roosters, 22c springers, 1¾ lbs. and over, 40c; 1¼ to 1½ lbs., 38@39c; 1 to 1¼ lbs., 36@37c; White Leghorns, 1½ lbs. and over, 36c; smaller, 35c. Ducks, young Pekings, 3 lbs. and over, 31@32c; puddle, 3 lbs. and over, 30@31c; muscovy, 3 lbs. and over 30c; smaller and poor, 27@28c; pigeons young, per pair, 30@35c; old, per pair, 35@40c; guinea fowl, young, 1 lb. and up each, 60@75c.

PHILADELPHIA LIVESTOCK

—Aug. 23, 1920.

Receipts for the week ending Aug. 21, 1920, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Totals for week	2,335	6,252	7,394
Previous week	2,200	7,041	7,394

Calves.—Receipts of calves were 1,879 head against 2,610 head previous week.

Beef Cattle.—Steers and cows were steady, with a little better feeling in the market. Veal of fine quality ruled steady, but the under grades were dull and irregular. Quotations: Steers, good to choice, $14.50@16; fair to good, $13@14.50; common to fair, $11@13; cows, dairy, good to choice, 9½@10c; **do., fair to good,** 7@8½c; bulls, 7@10c; calves, extra to choice, $17@18; fair to good, $14@16; common, $10@12; Tennessee, $11@13; other southerns, $6@9.

Sheep and Lambs.—There was a fair inquiry for desirable stock, and values generally ruled steady under moderate offerings. Quotations: Sheared sheep, wethers, extra, $8.50@9; do., good to choice, $7@8; do., medium, $5@6; do., common, $2@3; ewes, heavy fat, $6@7; lambs, spring, choice, $14@14.50; medium, $11@12.50; common, $7@9.

Hogs.—Western stock sold fairly and ruled steady. Nearby stock was quiet and somewhat irregular, with occasional sales reported at a premium over quotations. We quote: Best western, $18.50; good, nearby, $16.25@16.75.

City Dressed Stock.—There was little activity in the market for steers, heifers and cows and no important change in prices. Veal and lamb sold fairly and ruled steady. Other kinds were generally steady with demand fair for choice stock. We quote: Steers, 21@28c; heifers, 18@26c; cows, choice, 19@21c; cows, light, 12@16c; calves, city dressed, choice, 27@30c; calves, country dressed, 24@26c; lambs, spring, choice, 28@30c; sheep, 10@20c; hogs, 23½@24c.

NEW YORK HAY AND GRAIN

—Aug. 23, 1920.

Feed.—The market for mill feed was neglected and the undertone was barely steady. Buyers were inclined to be indifferent owing to the declining tendency of grains in general, and mills seem quite anxious to make sales, altho slow about reducing prices. In some cases Western prices were advanced to include the new freight rates.

Quotations: City feed bran, $50; middlings, $56 in 100 pound sacks; red dog, $78, nominal, in 100-pound sacks; Western spring bran, $57; standard middlings, $58; flour middlings, $70; red dog, nominal, all in 100-pound sacks, 30-day shipment. Oat feed, $37; rye middlings, $54; white hominy feed, $67, all in 100-pound sacks. Cottonseed oil meal, $62@63; linseed oil meal, $64, in 100-pound sacks.

Hay and Straw.—There were 40 cars in the yards at 33d street this morning and the supply at the various harbor points is gradually wearing away. Trade only fair and we see no change in values. Rye straw firm. Oat and wheat straw slow.

Hay—Large Bales. Timothy—No. 1, $41@45; No. 2, $36@42; No. 3, $31@36; Shipping, $28@31; No grade, $20@26; No. 3, $30@34; Shipping, $27@30.

Clover, Mixed—Fancy, $36@42; No. 1 $30@35; No. 2, $27@30.

Straw.—Large Bales.—No. 1 rye, $20; No. 1 oat, $10@11; No. 1 wheat, $10@11.

PHILADELPHIA HAY AND GRAIN

—Aug. 23, 1920.

Baled Hay and Straw.—Receipts, 84 tons of hay and 1 car of straw. Quiet and prices favored buyers. We quote: Old timothy hay, No. 1, none here; No. 2, $34@36; No. 3, $28@30; sample, $23@25; no grade, $18@21; old clover-mixed hay, light mixed, $30@31; No. 1 mixed, $28@29; new hay, as to quality and condition, $25@30; exceptional lots higher.

Straw.—No. 1 straight rye, $17@17.50; No. 2 do., $16@16.50; No. 1 tangled rye, $15@15.50; No. 2 do., $14@14.50; No. 1 wheat straw, $12.50@13; No. 2, do., $11.50; No. 1 oat straw, $13.50@14; No. 2 do., $12.50@13.

Bran.—In light request at former rates. We quote: Car lots, including sacks. Soft winter bran, western, in 100-lb. sacks, per ton, $52@52.50; spring bran, in 100-lb. sacks, per ton, $51@51.50.

Corn.—No 1, yellow, $170@1.75.

Wheat.—New, No. 2 red winter, $2.70@$2.75; No. 2 red winter, garlicky, $2.60@2.65.

Oats.—No. 2 white, 86@87c; No. 3, white, 85@86c.

PITTSBURGH HAY AND STRAW

—Aug. 23, 1920.

Receipts of hay are the lightest they have been for some time. There is an excellent demand as most of the buyers are practically out of hay and are willing to accept shipments at any reasonable figure. Good sound new hay can be placed to advantage. Market quiet but steady.

Demand for ear corn limited with few arrivals while receipts of oats more than equal the demand. Market on both these commodities quiet. The following prices can be realized:

Old and new No. 1 Timothy Hay, $38@38.50; Old and new Standard, $35.50@36; Old and new No. 2 Timothy hay, $33@34; Old and new No. 3 Timothy hay, $29.50@30; Old and new No. 1 Light Clover Mixed, $33@34; No. 1 Oat Straw, $15@15.50; No. 2, Oat Straw, $14.50@15; No. 1 Wheat Straw, $14.50@15; No. 2 Wheat Straw, $14@14.50; No. 1 Rye Straw, $15@15.50; No. 2, Rye Straw, $14.50@15; No. 2 Yellow Ear Corn, $1.69@1.70; No. 2 White Oats, 84@85c.

PHILADELPHIA DAIRY MARKET

—Aug. 23, 1920.

Butter.—Receipts, 1,641 tubs. Offerings of fine goods were exceedingly light and prices ruled firm, but as usual on Saturday there was not much wholesale trading. Medium and under grades were dull and irregular in value. Quotations follow: Fresh, solid-packed creamery, high-scoring goods, 58½@60½c, the latter for jobbing sales; extra, 57½c; do., extra firsts, 56½c; firsts, 52@55c; seconds, 47@50c; lower grades, 43@46c, sweet creamery, choice to fancy, 59½@61½c; fair to good, 49@58½c; ladle-packed, as to quality, 44@47c; packing stock, 39@44c; fancy brands of nearby prints were jobbing at 65@68c; good to choice, 57@64c; fair, 54@56c.

Cheese.—Firm but quiet. Quotations: New York, whole milk, current make, fancy, firsts, 27½@28c; common to fair, 24@27c; Longhorns, 26½@27½c; single Daisies, 26½@27½c; jobbing sales of fancy goods, 29@30c.

NEW YORK MILK MARKET

—August 23, 1920.

Demand continued active in all parts of the city last week with arrivals no more than enough to supply the trade. The August rate for 3 percent milk in 200 mile zone is $3.35 per 100 lbs.; 3.6 percent milk is $3.59 and 4 percent milk $3.75.

Receipts of milk and cream in 40-quart cans for the week ending August 21, 1920, were as follows:

Railroad	Milk	Cream
Erie	38,722	4,143
Susquehanna	6,710	[illegible]
West Shore	11,766	2,278
Lackawanna	51,416	[illegible]
N. Y. Central (long haul)	198,491	5,063
Ontario	40,768	[illegible]
Lehigh Valley	56,915	[illegible]
New Haven	6,500	[illegible]
Pennsylvania	12,225	[illegible]
Other Sources	5,000	[illegible]
Totals	428,513	[illegible]
Same week last year	385,859	[illegible]

INTERSTATE MILK PRICES

—Aug. 23, 1920.

Philadelphia milk prices in effect August first are as follows: For three per cent milk, $4.20 per cwt., or basic quantity price per qt. of 9.1c. For 3.5 percent milk, $4.40 per cwt. or basic quantity price of 9.6c per qt. For four per cent milk, $4.60 per cwt., basic quantity price of 10c per qt. The price for surplus milk will be determined and sent out at the end of the month. When milk is not tested the price f. o. b. Philadelphia is to be 10c per quart.

Farm Products Prices and Prospects

CAR IMMOBILITY NOT CAR SHORTAGE

Facts made public the first of this week by the Illinois Agricultural Association as a result of its freight car survey indicate that car shortage is due to failure to use the cars the railroads now possess to the fullest extent. Members of the Association made daily records of the car initials and numbers of all cars at 494 stations located in 46 different counties in the state for seven consecutive days. At 146 stations, or 29.5 per cent, some of the same cars were on the tracks the last day that were there the first day of the count. At all the 494 stations 9,294 cars were listed the first day and 938 of these had not been moved after seven consecutive days. This is a little over 10 per cent.

"Mine operators say they were forced to idleness many days each week leading to the strike of the miners just when the farmers were needing coal for threshing. At this same time before the strike in Christian County, at Clarksdale and Willeys two trains of coal cars totaling 53 cars were reported empty on both the first and last days of the count."

Transportation inefficiency or "car imobility" is the the real trouble. The Illinois report suggests several possibilities. "Official inertia due to guaranteed profits," "Laziness of railroad workers due to big wage awards and overtime provisions," "the tipping system', or "a condition which must be outgrown with everybody doing their level best."

The Indiana Farm Bureau has also collected some interesting facts upon idle cars in communities which were clamoring for cars to load.

It has been computed that an increase of one mile per day in the average distance traveled per car would release 100,000 cars. Raising the average load per car from 70 per cent of its capacity where it is now to 75 per cent would release 120,000 cars. Reducing the average idle time of cars from eight hours per day to seven hours would release 140,000 more cars. The total number of cars thus liberated would be larger than the railroads claim they need.

The railroads claim to be making substantial progress in improving traffic conditions. The latest figures which are for May indicate an increased number of loadings and a greater mileage per day on most roads compared with May, 1919. Daniel Willard, president of the Baltimore and Ohio, recently claimed that the return of the railroads to private ownership together with the authorization of increased rates and increased wages had given workers a new lease on life already reflected in freight conditions. Meanwhile farmers who want grain cars and can't get them while empties are standing on nearby side-track will wonder when the rest of the slack will be taken up.

COMMISSION RATE INCREASES

In 1914 when costs of living and doing business were supposedly normal, commission rates at Chicago were a minimum of $10 per car for cattle and calves, and for hogs a minimum of $8 per car. Rates now are $18 per car on cattle and calves, an increase of 80 per cent, and $13 per car of hogs, an increase of 63 per cent. Cattle in 1914 sold in Chicago for average price of $8.65. The average price so far this year is perhaps $13.50, an increase of 56 per cent. The average price of hogs in 1914 was $8.30; so far this year an increase of about 75 per cent. On the whole commission rates are ahead in the race, and along with labor and all charges for personal service will be slow to fall with the descent in the general level of commodity prices.

UNUSUAL SPREAD IN CATTLE PRICES

Prime steers scored at $17.50 at Chicago last week which is high mark for the year. Good steers generally gained 25@50c during the interval but the undesirables are about where they were a week ago. The price spread has not yet stopped widening. Chicago received its first taste of Montana cattle on the weeks' opening session. Despite feed abundance in the pastoral region they were marketed prematurely.

Good she stock as well as canners gained gained 25@40c but medium and lower grades of cows lost about 25c last week. Bulls of beef and bologna varieties advanced 25@50c, the better kinds advancing most. Enlarged receipts at eastern markets, big runs of Texas calves and low prices for calk skins all figured in the break of 50@75c in the veal division during the closing days of the weeks. Wholesale prices on veal carcasses are off $4@6.

FEEDER DEMAND BROADENS

Feeder outlet has broadened recently. Iowa inquires but does little, Illinois is buying and Pennsylvania is purchasing earlier than usual. The behavior of this market hinges greatly upon the corn crop. Frosts in Northern Nebraska are reported already. Should the corn crop, now from one to three weeks late, be caught by frost, it would mean a furore in stocker and feeder buying circles. Values are now about the lowest in three years and much further depreciation seems improbable. The supply of well bred stuff in the market runs is meager.

"WHAT A PACKER THINKS ABOUT"

Periodical breaks and rallies within a range of about $1.00 feature the hog trade. The recent slump which reached low point the middle of last week was due in part to reduced demand at Chicago for shipment to eastern markets. Receipts were curtailed slightly by the break and packers started to buy more freely on the lower price scale turning the tide in the other direction. The inconsistency of packers' action toward values renders interpretation of their motives uncertain, but the belief prevails that they are bent on supporting the market to avoid depreciating values of their storage stocks. During the period when eastern shipper buyers were out of western markets the spread between bacon and packing grades narrowed. A slight advance in lard also helped the lower end of the hog price list. The Southwest is selling breeding stock, but its offerings show more finish than in the recent drouth years.

PROVISION PRICES INDICATE CHEAP HOGS

Prices of mess pork are approximately on the basis of $10 hogs; short ribs on the basis of $12 hogs and lard prices would indicate $14 hogs. If these products were the sole outlet for hog meat the price would be low indeed. Fresh pork demand raises the level materially. Recently cured products have advanced slightly, as we are entering the usual season of big lard sales. Foreign purchases for future shipment are claimed but amounts are not specified and those who scrutinize the provision market for possible indications of the behavior of the live hog market get little satisfaction. The movement across the Atlantic is only fair, but the sale of crops in Europe is said to be helping foreigners make purchases and their fat stores are depleted. The cotton picking season and consequent provision buying will begin soon in the South. Strength in the provision market will not help growers greatly this year as the spring born crop of pigs will begin to press upon the market before long.

LIVE MUTTONS AT YEAR'S LOW POINT

After a prosperous winter feeding season good fortune has deserted the sheep producer for the time being. Wool is unsalable and values on the hoof are at the lowest level of the year. Last week's loss was about $1.00 to $1.50 on lambs and yearlings with ewes and wethers losing 50 cents to $1.25. Over 200,000 carcasses of frozen lamb and mutton arrived in the east, a quantity equal to a moderate week's run of live muttons at ten markets, and in addition receipts around the circle of big markets increased about 50,000, or over 20 per cent over those of the preceding week. Dressed lamb prices lost $2@3 in the big markets. Western lambs lack their usual bloom and natives now include a big percentage of bucky lambs, the heavier of which are discounted $4@5 per cwt. Feeder values strengthened 50@75c but further weakness in fat grades caused most of the advance to fade before the week-end.

WOOL DEADLOCK CONTINUES

Wool supplies are piled high in warehouses at big receiving points, and enormous quantities are in transit. Buyers are lying low awaiting developments, but a slight increase in interest was manifested the past week. The woolen goods trade is inactive, sales for fall delivery are not large and mills are still closed or on reduced schedules. Practically three months have passed since the market collapsed. The reduction in stocks of goods during that interval will counteract some of the bearish sentiment. Quotations are nominal and seem out of line with the occasional published reports of sales.

GOOD DRAFT HORSES WANTED

Loggers, wagon horses and Southern chunks are reasonably popular kinds of horse flesh at present, but good big drafters are wanted most. Between good ones and blemished unconditioned sorts a great gulf is fixed. Quotations follow: Chicago, good heavy drafters, $235@275; common and medium drafters, $125@$175; good wagon horses, $200@215; farm mares, $125@240.

Successful corn growers select their own seed in the field and cure it carefully.

The Porkiest Porkers You Ever Had

YOU'LL say just that; You'll be so proud you will want to show your hogs to all your neighbors when you use

Cal-Sino

Cal-Sino makes your feed produce more pork in less time; knocks worms; wards off sickness including cholera. Makes even runts thrive and cures most hog diseases.

Cal-Sino is made for hogs only. It really costs you nothing to use as it many times over pays for itself. GUARANTEED to satisfy you or your money back.

Mr. George Leman Moyer, Newport, Pa., wrote August 25, 1919:—"My hogs were very rough looking, but within one week after starting Cal-Sino they were looking fine, yet ate only about half as much as before.

They averaged about 55 lbs. when I got them and now after four months they average 175 lbs. If I had started Cal-Sino at once when I got them I am sure they would weigh still heavier by now."

Send for 60c or $1.25 trial package and name of nearest dealer; you to pay only if and when satisfied, after at least 2 weeks regular use.

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"Just remember C-S—in the round yellow box."

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will reduce inflamed, swollen Joints, Sprains, Bruises, Soft Bunches; Heals Boils, Poll Evil, Quittor, Fistula and infected sores quickly as it is a positive antiseptic and germicide. Pleasant to use; does not blister or remove the hair, and you can work the horse. $2.50 per bottle, delivered. Book 7 R free.

ABSORBINE, JR., the antiseptic liniment for mankind, reduces Painful, Swollen Veins, Wens, Strains, Bruises; stops pain and inflammation. Price $1.25 per bottle at dealers or delivered. Will tell you more if you write. Liberal Trial Bottle for 10c in stamps.
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The farmer's old reliable treatment for Lump Jaw in cattle.

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Sold for $2.60 (war tax paid) a bottle under a positive guarantee since 1896—your money refunded if it fails. Write today for FLEMING'S VEST-POCKET VETERINARY ADVISER. A book of 197 pages and 67 illustrations. It is FREE.
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HOLSTEIN BULL CALF 3 mos. old, beautifully marked, showing the wonderful individuality of his sire, a nearly 32-lb. son of King Model. This calf is exceptionally well grown. Send for price and pedigree. Hope Farm, R. 1, Lititz, Pa.

LEGHORN COCKERELS From Barron 300 egg strain pedigreed White Leghorn cockerels 16 weeks old, to be delivered in Sept. Satisfaction guar't'd. Prices No. 1, $5; No. 2, $3.50. L. C. Beam, E. Mauch Chunk, Pa.

HAY Ship to The Old Reliable House
DANIEL McCAFFREY'S SONS
623-25 Wabash Bdg., Pittsburgh, Pa.

TELL the advertiser you saw adv. in Pennsylvania Farmer.

Whispering Smith

by Frank H. Spearman

CHAPTER XXV.

The Man on the Frenchman

(Continued from Last Week).

Dicksie hardly saw the titles as she passed them over, but of a sudden she stopped. Between two sheets of the music lay a small handkerchief. It was mussed, and in the corner of it "Nellie" was written conspicuously in a laundry mark. The ordor of musk became in an instant sickening. Dicksie threw the music disdainfully aside, and sprang up with a flushed face to leave the room. Sinclair's remark about the first woman to cross his threshold came back to her. From that moment Dicksie hated him. But no sooner had she seated herself on the porch than she remembered she had left her hat in the house, and rose to go in after it. She was resolved not to leave it under the roof another moment, and she had resolved to go over and wait where her horse was tied. As she re-entered the doorway she stopped. In the room she had just left, a cowboy sat at the table, taking apart a revolver to clean it. The revolver was spread in its parts before him, but across the table lay a rifle. The man had not been in the room when she left it a moment before.

Dicksie passed behind him. He paid no attention to her; he had not looked up when she entered the room. Passing behind him once more to go out, Dicksie looked through the open window before which she sat. Sinclair and Marion sitting under the cottonwood tree were in plain sight, and the muzzle of the rifle where it lay covered them. Dicksie thrilled, but the man was busy with his work. Breathing deeply, she walked out on the porch again. Sinclair, she thought, was looking straight at her, and in her anxiety to appear unconscious she turned, walked to the end of the house, and at the corner almost ran into a man sitting out of doors in the shade mending a saddle. He had removed his belt to work, and his revolver lay in the holster on the bench, its grip just within reach of his hand. Dicksie walked in front of him, but he did not look up. She turned as if changing her mind, and with a little flirt of her riding-skirt sat down in the porch chair, feeling a faint moisture upon her forehead.

"I am going to leave this country, Marion," Sinclair was saying, "There's nothing here for me; I can see that. What's the use of my eating my heart out over the way I've been treated? I've given the best years of my life to this railroad, and now they turn me down with a kick and a curse. It's the old story of the Indian and his dog, only I don't propose to let them make soup of me. I'm going to the coast, Marion. I'm going to California, where I wanted to go when we were married, and I wish to God we had gone there then. All our troubles might never have been if I had got in with a different crowd from these cow-boozers on the start. And, Marion, I want to know whether you'll give me another chance and go with me."

Sinclair, on the bench and leaning against the tree, sat with folded arms looking at his wife. Marion in a hickory chair faced him.

"No one would like to see you all you ought to be more than I, Murray; but you are the only one in the world that can ever give yourself another chance to be that."

"The fellows in the saddle here now have denied me every chance the railroad—you know that. Marion to make a man of myself again on ion. In fact, they never did give me the show I was entitled to. I ought to have had Hailey's place. Bucks never treated me right in that; he never pushed me in the way he pushed other men that were just as bad as I ever was. It discouraged me; that's the reason I went to pieces."

"It could be no reason for treating me as you treated me: for bringing drunken men and drunken women into our house, and driving me out of it unless I would be what you were and what they were."

"I know I haven't treated you right; I've treated you shamefully. I will do anything on earth you say to square it. I will! Recollect, I had lived among men and in the same country with women like that for years before I knew you. I didn't know how to treat you; I admit it. Give me another chance, Marion."

"I gave you all that I had when I married you, Murray, I haven't anything more to give to any man. You would be disappointed in me if I could ever live with you again, and I could not do that without living a lie every day."

He bent forward, looking at the ground. He talked of their first meeting in Wisconsin; of the happiness of their little courtship; he brought up California again, and the Northwest coast, where, he told her, a great railroad was to be built and he should find the chance he needed to make a record for himself—it had been promised him—a chance to be the man his abilities entitled him to be in railroading. "And I've got a customer for the ranch and the cows, Marion. I don't care for this business—heck with the cows! let somebody else chase after 'em through the sleet. I've done well; I've made money—a lot of money—the last two years in my cattle deals—and I've got it put away, Marion; you need never lift your hand to work in our house again. We can live in California, and live well, under our own orange trees, whether I work or not. All I want to know is, will you go with me?"

"No! I will not go with you, Murray."

He moved in his seat and threw his head up appealingly. "Why not?"

"I will never be dishonest with you; I never have been and I never will be. I have nothing in my heart to give you, and I will not live upon your money. I am earning my own living. I am as content as I ever can be, and I shall stay where I am and do what I am doing till I die, probably. And this is why I came when you asked me to; to tell you the exact truth. I am not a girl any longer—I never can be again. I am a woman. What I was before I married you I never can be again, and you have no right to ask me to be a hypocrite and say I can love you—for that is what it all comes to—when I have no such thing in my heart or life for you. It is dead and gone, and I cannot help it.

"That sounds pretty hard, Marion."

"It is only the truth. It sounded hard to me when you told me that woman was your friend—that you knew her before you knew me and would know her after I was dead; that she was as good as I, and that if I didn't entertain her you would. But it was the truth; you told me the truth, and it was better that you told it—as it is better now that I tell it to you."

"I was drunk. I didn't tell you the truth. A man is a pretty tough animal sometimes, but you are a woman and a pure one, and I care more for you than for all the other women in the world, and it is not your nature to be unforgiving."

"It is to be honest."

He looked suddenly up at her and spoke sharply: "Marion, I know why you won't go."

"I have honestly told you."

"No; you have not honestly told me. The real reason is Gordon Smith."

"If he were I should not hesitate to tell you, Murray, but he is not," she said coldly.

Sinclair spoke harshly: "Do you think you can fool me? Don't you suppose I knew he spend his time loafing around your shop?"

Marion flushed indignantly. "It is not true!"

"Don't you suppose I know he writes letters back to Wisconsin to your folks?"

"What have I to do with that? Why shouldn't he write to my mother? Who has a better right?".

"Don't drive me too far. By gosh! if I go away alone I'll never leave you here to run off with Whispering Smith—remember that!" She sat in silence. His rage left her perfectly quiet, and her unmoved expression shamed and in part silenced him. "Dont' drive me too far," he muttered sullenly. "If you do you will be responsible, Marion."

She did not move her eyes from the blue hills on the horizon. "I expect you to kill me sometime; I feel sure you will. And that you may do." Then she bent her look on him. "You may do it now if you want to."

His face turned heavy with rage. "Marion," he cried, with an oath, "do you know how close you are to death at this moment?"

"You may do it now."

He clinched the bench-rail and rose slowly to his feet. Marion sat motionless in the hickory chair; the sun was shining in her face and her hands were folded in her lap. Dicksie rocked on the porch. In the shadow of the house the man was mending the saddle.

CHAPTER XXVI.

Tower W

At the end of a long and neglected hall on the second floor of the old bank block in Hill Street, Whispering Smith had a room in which he made headquarters at Medicine Bend; it was in effect Whispering Smith's home. A man's room is usually a forlorn affair in spite of any effort to make it home-like. If he neglects his room it looks barren, and if he ornaments it is looks fussy. Boys can do something with a den because they are not yet men, and some tincture of woman's nature still clings to a boy. Girls are born to the deftness that is to become all theirs in the touch of a woman's hand; but men, if they walk alone, pay the penalty of lonliness.

Whispering Smith, being logical, made no effort to decorate his domestic poverty. All his belongings were of a simple sort and his room was as bare as a Jesuit's. Moreover, his affairs, being at times highly particular, did not admit of the presence of a janitor in his quarters, and he was of necessity his own janitor. His iron bed was spread with a pair of Pullman blankets, his toilet arrangements including nothing more elaborate than a shaving outfit, and the mirror above his washstand was only large enough to make a hurried shave, with much neck-stretching possible. The table was littered with letters, but it filled up one corner of the room, and a rocking-chair and a trunk filled up another. The floor was spread with a Navajo blanket, and near the head of the bed stood an old-fashioned wardrobe. This served not to ward Whispering Smith's robes, which hung for the most part, on his back, but to accommodate his rifles, of which it contained an array that only a practised man could understand. The wardrobe was more, however, than an armory. Besides the guns that stood racked in precision along the inner wall, McClond had once, to his surprise, seen a violin. It appeared out of keeping in such an atmosphere and rather the antithesis of force and violence than a complement for it. And again, though the rifles were disquietingly bright and effective-looking, the violin was old and shabby, hanging obscurely in its corner, as if, whatever it might have in common with its master, it had nothing in common with its surroundings.

The door of the room in the course of many years had been mutilated with keyholes and re-inforced with locks until it appeared difficult to choose an opening that would really afford entrance; but two men besides Whispering Smith carried keys to the room—Kennedy and George McCloud. They had right of way into it at all hours, and knew how to get in.

McCloud had left the bridge camp on the river for Medicine Bend on the Saturday that Marion Sinclair—whose husband had finally told her he woudl give her one more chance to think it over—returned with Dicksie safely from their trip to the Frenchman ranch.

Whispering Smith, who had been with Bucks and Morris Blood, got back to town the same day. The president and general manager were at the Wickiup during the afternoon, and left for the East at nine o'clock in the evening, when their car was attached to an east-bound passenger train. McCloud took supper afterward with Whispering Smith at a Front street chop-house, and the two men separated at eleven o'clock. It was three hours later when McCloud tapped on the door of Smith's room, and in a moment opened it. "Awake, Gordon?"

(Continued Next Week).

Lubricate first, last and always, is the slogan of efficient tractor service. Stopped tubes that do not carry grease to the journal and loose cup covers are both excellent ways of wearing out your machine.

LIVE STOCK

HOGGING DOWN CORN

By Prof. W. H. Tomhave

With the increase in the number of hogs produced thruout the eastern states and the present labor situation, it is essential to follow the "path of least resistance." The practice of "hogging down corn" is becoming more universal and might profitably be followed on many more farms. Some people are inclined to call it the "lazy man's method of pork production" but those who have once fattened hogs by this method are fully convinced that it is a very economical and efficient method of preparing hogs for market. It helps solve the labor problem and the returns per acre of corn are greater than if the corn is cut and husked for the hogs.

In an experiment at the Pennsylvania Station ten hogs were allowed to forage in the corn field and ten other hogs were fed corn in the feed lot. Lot 1 in the corn field made a daily gain of 1.74 pounds, compared to a gain of 1.45 pounds daily in the case of Lot 2, fed corn in the dry lot. Lot 1 consumed 98 bushels of corn against 87 by Lot 2 during the same length of time showing a better appetite and ability to consume more corn.

It is of special interest to note the figures covering the gains of the two lots in pounds per bushel of corn consumed. The corn field lot made a gain of 12.6 pounds for each bushel of corn consumed while the dry lot made a gain of 11.6 pounds per bushel of corn consumed.

In "Hogging off corn" demonstrations in Pennsylvania 600 shoates were used for twenty-four demonstrations. The hogs were in the corn field for an average of 32 days, varying with the different sections. The average weight of the hogs when turned into the corn field was about 123 pounds and they weighed 173 pounds at the close. They made an average daily gain of 1.55 pounds per head daily. They consumed 54.28 acres of corn and gained 29,574 pounds or 545 pounds of gain per acre of corn. Check lots of corn were used to determine the yield of corn which was 43.4 bushels. These hogs were all sold at the close of the demonstration and averaged last year $15.84 per hundredweight. After allowing for the cost of fencing the corn field, interest on the investment, labor of feeding and the supplementary feed, the hogs returned a price of $1.88 per bushel for all the corn which they consumed.

For hogging down corn it is desirable that definite plans be made at corn planting time. In this I have reference to the location of the field to the hog lots, the convenience of supplying water and the amount of fence necessary, tho the usual variety grown need not be changed.

Pigs weighing from 100 to 140 pounds are best suited for field feeding as pigs of such weight if produced on forage have sufficient bone, muscle and framework to fatten well. Forage crop pigs as a rule will do better in the corn field than dry lot pigs, because they are more active and have become accustomed to gather food for themselves.

It will be necessary to erect a temporary fence around the area that is to be hogged down. As soon as the corn becomes scarce in the field, the hogs should be moved to a new lot as the best results in fattening are secured when the pigs have plenty of corn. A common 26 to 30 inch woven wire fence will turn the hogs in the field. This should be fastened to good corner posts and run along a corn row so that it can be wired to stalks and an occasional post driven in the ground to which to fasten the wire. A fence constructed in this manner can be made without much expense and is easily moved. It is desirable not to give the hogs too large a range at one time, as they will make better use of the corn if restricted to a small area. Brood sows or stock hogs can follow the fattening hogs in the field and clean up any corn that may remain. An acre of ground that will yield fifty bushels of shelled corn will carry twenty hogs weighing about 125 pounds for about 18 days.

The best time to turn the hogs into the corn field is when the corn is dented or bordering on maturity. If it is convenient to do it is well to feed the hogs a small allowance of new corn before they are turned into the field. Such practice will get them accustomed to the green feed and they will thrive better in the corn field.

In order to get the best results it is desirable to feed a supplementary protein feed. An allowance of tankage, fish meal, or oil meal, or skim milk will give the best results. Tankage or fish meal should be allowed at the rate of about one pound for every four hundred pounds of live weight. Oil meal should be allowed at the rate of one pound for each two hundred and fifty pounds live weight. A liberal daily allowance of butter-milk or skim milk will not only provide the protein necessary but will also replace a considerable amount of water. If a field of corn is planted for the hogs, it is a desirable practice to seed soy beans, cow peas, or rape in the field as it will replace a part of the protein feed and will also increase the amount of feed.

The hogs should have access to plenty of good water. A liberal supply of water will increase the ability of the hogs to make use of the corn on the field.

Shelter of some kind must be provided. This should be of such a character as will protect the hogs from the hot sun during the warm days of fall and also provide protection from rain and cold wind.

BREAKS WORLD'S RECORDS

Three world's record prices were broken at the Epochal Estates, Indiana. Epochal Laurel, an eleven months old Berkshire boar, sold for $6,500, a new world's record price for a Berkshire boar at public auction. He was bought by Cyril Mattingly. This boar is a son of Laurel Champion, out of a daughter of Epochal, which gives him a combination of the blood of two of the most famous of all Berkshire boars. Laurel's Epochal is only one of a number of boars of this family that have sold for high prices, as a half brother of Laurels' Epochal brought $5,000 a few months ago

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35 Tons of Coal to be given away

If your WARM AIR FURNACE is a Novelty and has been in use longer than any other NOVELTY WARM AIR FURNACE submitted in this contest there is a prize of 10 tons of Coal for you.

Or if your WARM AIR FURNACE is not a Novelty and has been in use longer than any other WARM AIR FURNACE brought to our attention before October 1st, you will get 5 tons of Coal.

Your chance to win is as good as your neighbor's. In the event of a tie each of the winners will receive the full amount of the prize.

A Mere Letter May be Good for Two Tons of Coal

Send us the name, number and age of your furnace. Look over your furnace while you are at it. Summer time is "Furnace fixing" time—and while you are working for your prize you may discover some little difficulty in your furnace that kept heat down and cost up—last winter.

Think of that. There are ten prizes of two tons of coal each to be given for the ten most interesting letters in which the contestants outline their experience with their WARM AIR FURNACES—regardless of make or age, or whether or not that experience has been favorable. Tell your own experience regardless. We are proud of the hundreds of thousands of Novelty furnaces in use—we want to know something about them—how long they have been in use—what kind of service they have been giving—where they are—who has them. If your furnace is not a Novelty, tell us about it anyway. We may be able to help you to greater heating economy. So today—tell us how old your furnace is—or write a letter of your experience.

The contest closes October 1st. Don't miss this chance to get next winter's coal FREE—coal from your own dealer—and the coal best suited to your needs.

Address Replies to Contest Director F

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Black and White Dispersion
65 Purebred Holsteins
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Champion Chester Co. Milk Cow 1919-1920
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One that has milked 5 tons in last 5 months!
Only cow in county to win H. F. Ass'n. of America prize money the last year!
Our long distance King Segis bull's 6 nearest dams average 4.0 per cent fat.
Most of cows have advanced registry records and have milked over 10,000 lbs. the last year (including first calf heifers). Are young and fresh or shortly due. Yearling bulls 43 per cent Pontiac Korndyke!
An absolute dispersion. Show stock. Foundation stock!

Fair Ground W. Chester, Pa.
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Labor Day, Sept. 6th, 12.45 Promptly
For Circulars: F. C. BRINTON, Jr.
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registered in the Herd Books of the Holstein Friesian Association of America. Herd sire out world's record senior four year-old.
KEYSTONE BEAUTY PLUM JOHANNA
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At 4-10-20, 365 days—25787.5 milk; (4.02%) 1294.7 butter
At 3- 3-23, 365 days—22496.8 milk; (3.94%) 1108.9 butter
2 years under full age—48284.1 milk; 2403.6 butter. The youngest cow in the world to have two consecutive records averaging over 24,000 lbs. of 4% milk in a year.
Bull calves $100.00 and up. GEORGE E. STEVENSON & SONS, Clarks Summit, Pa.

Look! $14 BABY CHICKS a 100 up!
By insured parcel post, postage paid. 40 breeds chicks, 4 breeds ducks. Get August and September chicks for February and March layers. Catalog free, stamps appreciated.
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Crystal Spring Poultry Farm
Offers at least 500 extra fine cockerels, from 16 to 24 weeks old; also B. P. Rocks, R. I. Reds, W. Leghorns and Bl. Minorcas, at $2 and $2.50 ea. Satisfaction guaranteed. M. E. Basehoar, Littlestown, Pa.

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Farm range, prize winning Buttercups. Investigate this wonderful variety. Write for circular.
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TIFFANY'S SUPERIOR DUCKS
Mammoth Pekin, Giant Rouen, and Indian Runner Ducks and Drakes, $2.50 each and up.
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Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
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LEGHORN COCKERELS 4 months old S. C. White [illegible] Cockerels. Sons of hens with records of [illegible] eggs. Trap-nested 9 years. Paul Clark, [illegible] No. 2, Sunbury, Pa.

SPECIAL Barred Rock Chix, $15 per 100; Reds, $17; White and Brown Leghorns, $13 per 100; Anconas, $20. Each week, prepaid, [illegible]
E. R. HUMMER & CO., Dept. T, Frenchtown, N. J.

GET PIELL'S BLACK LEGHORN COCKERELS. Fine yellow legged birds, $1.75 and $2.75. Russell F. Piell, Pittstown, N. J.

S. C. WHITE LEGHORN COCKERELS, 12 weeks old price $[illegible] [illegible] chance to improve your flock. All charges prepaid.
MRS. C. E. S[illegible] [illegible]FALO MILLS, PA., R. 1

THE RAM FOR FARM WATER SUPPLY

The first requisite for a water supply on the farm is that it shall be reliable; the second, that it shall be economical. The hydraulic ram, to my mind, fulfills these conditions better than any other form of power available to the ordinary farmer. Altho running water is not found on all farms, neither are all situations favorable to the successful operation of windmills. After experience with the hydraulic ram, and what I have seen of windmills, I think that on farms suitably situated for both, the ram will be found the cheaper and more reliable power.

I have placed a hydraulic engine on my farm a little over two years ago, and altho my primary object was to raise water for irrigation purposes, yet the water has proved such a convenience both for the stock and in the house, that I think it is well worth the outlay apart from my gardens. Our ram raises 2500 gallons of water in 24 hours thru 1000 feet of one-inch pipe to a height of over 80 feet, and discharges it into a cypress tank holding 5000 gallons, the bottom of which is raised about 15 feet from the ground. The water is piped from the tank into the kitchen and there are several hose plugs where the water is needed about the farm and house. A galvanized iron tank holding 2500 gallons would be large enough for most farms in this section of Southern New Jersey. If placed 25 feet above the buildings it would give more security against fire.

Several gardeners near here have springs a few hundred feet away, and perhaps 35 or 50 feet below the point to which the water is to be raised, that operate small rams which supply a constant stream of water wherever it is desired. Any farmer with running water within a fourth of a mile, where he can obtain a fall of 5 to 12 feet between two points in the bed of the stream, which are not more than 40 to 60 feet apart, can put in a small ram at a cost of from $35 to $50 for the ram and the market price for the piping. The initial expense is less in a ram than in any other power and where running water is available I am convinced that much better satisfaction will be given, combined with much less trouble and lower cost for repairs. The ram cannot be used where there is no running water, but if it is handy it is much cheaper to put in a ram than to put up a windmill or any other kind of power.—C. A. Umoselle, Atlantic Co., N. J.

DELAWARE NOTES

John H. Horton, of Milford, has been chosen as salesmanager for the 12 Producers' Associations in Sussex county and this year will handle the tomato crop of about 1500 farmers, comprising approximately seventy-five per cent of the tomato growers in Lower Delaware. His headquarters will be in Georgetown. These district exchanges constitute the Sussex County Producers' Association, Farmers Union, Millsboro Producers' Association, Selbyville; Producers' Exchange, Inc., Harbeson; Producers' Association, Bridgeville; Produce Growers' Association, Seaford; Producers' Association, Greenwood; Producers' Association, Milton; Farmers' Producers' Association, Milford; Producers' Exchange, Georgetown; Co-Operative Association, Dagsboro.

An agreement has been reached among growers that all fruit for shipment must be handled through the county exchange. If the prices offered for tomatoes is less than the cost of production, it is likely that the growers will allow them to remain in the fields and not attempt to harvest them.

M. C. Vaughn, county agent, and Mr. Vatakin of the egg-laying contest visited the poultry farm of Edward W. Palmer, near Delmar, Del., and gave a demonstration of the culling of non-laying from the laying hens to the flock. A large number of persons interested in poultry attended the exhibition.

At a very largely attended meeting of the tomato growers of the peninsula, held at Hurlock, Md., last week, it was decided to make the minimum price for the price of tomatoes for the crop for the year 1920 at 50 cents per basket. This meeting was attended by representatives from seven counties of the Eastern Shore of Maryland, and Kent and Sussex counties. Brooks L. Ross was elected delegate to the general convention of the Tomato Growers' Association of the United States which meets at Columbus, Ohio.—K. P. T.

MARYLAND NOTES

Nearly 50,000 crates of cantaloupes, each containing 45 melons were shipped from the city of Salisbury, Md., to the northern markets last week. The season is not yet at its best. It is expected that this week's shipments will double last week's. The prices have ranged around $3 a crate for prime fruit.

During the week 800 hampers of cucumbers were shipped from here to Baltimore. The cucumber season ended a week ago, but there is still a small demand for the late ripened fruit. The prices paid for the "cukes" has been around 80 cents a hamper.

Cantaloupes will reach the height of their season during the latter part of this week, and after that the daily shipments will begin to show a decrease. Following them will come the watermelon crop, and it is reported that the acreage devoted to that fruit in this county this year is greater than ever before.

The peach crop in this section is short. The late frosts and freezes practically ruined both the peach and apple crops for the Eastern Shore and causes the loss of many thousands of dollars to farmers. Local housewives today are paying from $1.50 to $2 for peaches of an inferior quality and the supply is very short. It is said that very few if any peaches will be shipped from Marylands' Eastern Shore this season.—K. P. T.

MIFFLIN CO., PA.

Up to two weeks ago this part of the county had very little rain. Since then we had plenty. The ground is too wet to get in with the binder, too wet to plough. Plenty of oats to cut yet, and very little ploughing done. Oats is a heavy crop and some fields much broken down by the heavy rains and storm Potatoes are reported a good crop in most parts of the county. Corn in promising a bumper crop. Some threshing done, wheat yielding 20 bushels to the acre. Old grain quotations: Wheat, $2.75; corn, $2; rye, $2; potatoes, 70c a peck; eggs, 50c; country butter, 65c; apples as low as 20c a peck; good plums, 50c a peck. Several car loads of sheep and cows shipped from this place. Cattle looking well where pasture did not get too short.—J. H. B.

YORK CO. NOTES

Owing to an abundance of rain this summer crops have been above the average yield in this section with the exception of wheat which was sown early last fall, it being badly damaged by the Hessian fly. The late sown wheat was a heavy crop. Oats was a heavy crop, yielding about forty bushels to the acre. Hay was also a good crop. Corn promises to yield better than for some seasons past. Coal is being shipped in very slowly to the local dealers, causing trouble in getting thrashing done.

The prices paid by dealers at the local warehouses are as follows: Wheat, $2.25; corn, $1.55; oats, 85 cents. Milk dealers pay $3.16 per hundred for milk. Milk cows continue to bring good prices. Some feeding cattle are being shipped into the stock yards.—B. K. S.

McKEAN CO., PA.

Very dry until this week. Crops were needing rain and springs and creeks very low. Crops are looking well, considering the dry weather. Hay better than expected. Oats looking fine, just beginning to turn. Prospects are good for a large crop of apples of good quality. New hay delivered, $30. Potatoes, $3 per bu. Early apples just beginning to ripen. Haying about two-thirds finished, no help to be had. Contractors on state road are bringing men from as far as Texas and wages are very high.

—R. C. F.

THE FARMERS' BOOKSHELF

The following list of books has been compiled by the officials of the New Jersey Agricultural Experiment Station as the Farmers' Bookshelf. The Pennsylvania Farmer will gladly advise its readers where these books may be obtained:

Horticulture

Lowther, Encyclopedia of Practical Horticulture; Corbett, Garden Farming; Bailey, The Farm and Garden Rule-book; Watts, Vegetable Gardening; Bailey, The Nursery Manual; Bailey, The Pruning Manual; Watts, Vegetable Forcing; Sears, Productive Small Fruits.

Insects

Shingerland and Crosby, Manual of Fruit Insects; Crosby and Leonard, Manual of Vegetable Garden Insects; Sanderson, Insect Pests of Farm, Garden and Orchard; Smith, Economic Entomology.

Farm Crops

Voorhees, Forage Crops; Piper, Forage Plants and their Culture; Carleton, The Small Grains; Fraser, The Potato; Montgomery, The Corn Crops; Montgomery, Productive Farm Crops.

Farm Management

Weld, The Marketing of Farm Products; Warren, Farm Management.

Soil and Fertilizers

Thorne, The Manures; Lipman, Bacteria in Relation to Country Life; Voorhees, Fertilizers; Lyon, Fippin, Buckman, Soils, Their Properties and Management; Van Slyke, Fertilizers and Crops; King, Soil Management; King, Irrigation and Drainage; King, Farmers of Forty Centuries.

Livestock

Hadley—The Horse in Health and Diseases; Hadley, Principles of Veterinary Science; Craig, Sheep Farming; Davenport, Principles of Breeding; Plumb, Types and Breeds of Farm Animals; Henry and Morrison, Feeds and Feeding Abridged; Henry and Morrison, Feeds and Feeding; Wing, Sheep Farming in America; Marshall, Breeding Farm Animals; Day, Productive Swine Husbandry; Coffey, Productive Sheep Husbandry; Gay, Productive Horse Husbandry; Craig, Diseases of Farm Animals.

Dairying

Frederiksen, The Story of Milk; Eckles, Dairy Cattle and Milk Production.

Poultry

Lewis, Productive Poultry Husbandry; Kaupp, Poultry Culture Sanitation and Hygiene; Robinson, Principles and Practice of Poultry Cultures.

Farm Mechanics

Ramsower, Equipment for the Farm and the Farmstead.

Home Economics

Van Rensselaer, Rose and Canon, Manual of Home Making; Farmer, The Boston Cooking School Cook-Book; Taber, Business of the Household; Balderston, Housewifery; Baldt, Clothing for Women.

BOOKS TO REACH 60,000,000 PEOPLE

Amelioration of library service conditions in the United States by providing book service to 60,000,000 persons now inadequately served, is the aim of the American Library Association through its Enlarged Program, for which a fund of $2,000,000 is being raised, not by intensive drive or campaign, but by personal appeal of libraries, library trustees and friends of libraries. The movement is an extensive peace time continuance of the Association's wartime activities, which distributed more than 7,000,000 books to service men in camps here and abroad and to men in the navy.

Books for every man, woman and child is the purpose of the Enlarged Program, which has "Books for Everybody" for its slogan. The A. L. A. proposes to promote good reading and universal self-education through books and libraries by creating a public sentiment that will adequately support existing libraries and cause libraries to be established where none now exists.

Co-operation with existing library agencies in the extension of the county library system, that dwellers in remote rural sections of the country may have ready access to the best of books, is one important phase of the movement. Americanization of 15,000,000 new comers is proposed by encouraging the reading of books on American ideals and traditions and by fostering the printing of more books on these subjects in foreign languages. Encouragement in establishing technical libraries in industrial plants in co-operation with the Special Libraries Association and with employers, is intended to bring books to workers. Augmented book service to men in the merchant marine, to patients in hospitals of the United States Public Health Service, lighthouse keepers, and coast guards, also is planned. Production of more books for the blind in the new, uniform Braille type is likewise fostered.

"No," said a shrewd old farmer, "I don't know as noise or talking at milking time reduces the flow of milk but it may make the job last longer!"

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Indigestion.—Have a horse that seems to be hide-bound, weak and does not gain in flesh. His urine is thick and creamy. Last year he was in fine condition. He is fed half peck soft food, some molasses with each meal. Have tried many tonics, without obtaining results. Had his teeth filed three weeks ago. What shall I do? A. J., Glenshaw, Pa. Give him half-ounce doses of Fowlers' Solution in feed or in drinking water three times a day, also give him a dessert spoonful of acetate of potash daily, until his kidneys act freely. You are not feeding him enough nutritious food to fatten him.

Young Pigs Cough.—We have used many of the remedies prescribed thru Veterinary Column, with excellent results, but fail to have a clipping telling what to do for four-month-old pigs that cough. It is not unusual for them to cough several minutes at a time. Their pen has plank floor, but yard is clay. K. B., Mountaindale, Pa. Mix equal parts ginger, baking soda and powdered licorice and give a small teaspoonful to each pig 3 times a day. Rub throat with camphorated oil daily.

Chronic Cough.—I have a four-year-old horse that has a very bad cough. He was shipped here from W. Va. with 3 other horses early last spring; they all took cold on the way, soon commenced to run at nose and cough. This sickness lasted about two months. They all recovered except one, he continues to cough. He has good appetite and does not appear to be sick. No discharge from nose and his cough does not grow worse. T. R. C., Rocks, Md. Rub throat with camphorated oil once a day, give him a dessertspoonful of powdered licorice in feed three times a day.

Lump Jaw.—I have a cow that was troubled with swollen jaw, bunch opened and kept on discharging for 6 months. I applied all kinds of healing remedies, but sore seemed to heal then after a time open again. I applied bichloride of mercury, it seemed to eat it out, then I packed on tar, bandaged it, then left packing on for 5 weeks, when packing was removed sore was healed. Will it now be safe to use her milk? S. R., Yellow Creek, Pa. First of all, she may not have had lump jaw. I am inclined to believe her milk fit for use, but if the sore was suppurating I should advise you not to use the milk.

Chronic Cripple.—I have a six-year-old mare that has not been driven since last fall. Last week I drove her a distance of eight miles. The following day I rode her back. Since then she is hardly able to move. She is so very stiff in all four legs. Can she be cured? If not, had I better destroy her? S. T., Tyrell, O. The long rest she had gave nature a splendid opportunity to effect a cure, but it failed. She should have been destroyed five months ago. It was a waste of feed keeping her.

A tireless worker is the tile drain. Day and night, while the ground is wet, it keeps at its job and asks no pay nor feed.

TIOGA COUNTY PENNSYLVANIA----THE HOME OF HEALTHY HOLSTEINS
PUREBREDS AND GRADES
40 herds under State and Federal supervision and many more on the waiting list
TIOGA COUNTY HOLSTEIN BREEDERS' ASSOCIATION
An organization backed by 100 paid memberships for the purpose of assisting its members in producing
GOOD HEALTHY HOLSTEINS
We invite inspection—Address all inquiries to
PAUL P. KORB, Secretary, WELLSBORO, PA.
TIOGA COUNTY HOLSTEIN BREEDERS' ASSOCIATION

MID-SUMMER SALE OF AYRSHIRES
A fine selection of heifer calves, bred heifers, and young cows in this offering. Excellent opportunity to found or build up your herd with animals from the best breeding backed by large records. Prices reasonable—Tuberculin tested, no reactors.
CRESTMONT FARM, SUNBURY, PA

MAPLE LAWN HOLSTEINS

High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.
C. W. Ellis, Jr., Maple Lawn Farms, Cortland, N. Y.

Registered and Grade Holsteins
Get busy you calf club promoters. I have 50 registered heifer calves, 3 to 10 months old, $100 each for the lot, choice $125.00. 200 registered and high grade cows, heifers and bulls. Car of any age that you want. ⅞-Holstein heifer calves, $20 each. Express paid in lots of 5.
J. C. Reagan, Tully, N. Y.

BULL CALVES at BARGAIN PRICES
We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred, healthy bulls, from a clean, Tuberculin Tested Herd at reasonable prices. King of the May—Dolly Dimple—Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees.
WAWA DAIRY FARMS, 22 S. 32nd St., Phila., Pa.

STEVENS' HOLSTEIN FARM
OF CORTLAND, N. Y.
King Korndyke Sadie Vale Jr., No. 20391, two nearest dams averaging 36 pounds of butter in 7 days, heads my herd. Butter records from 17 pounds two-year-olds to 34 pounds at full age. Also high grade Holstein calves, either sex, $20.00 each. Write your wants. PAUL H. STEVENS, Prop.

FOR SALE—THREE GUERNSEY Bull Calves, sired by Langwater Music's Dimple King, out of dams on test; one out of grand-daughter of King of the May, $100 up. A. J. Fell, Lansdale, Pa.

Nine Reg. Guernsey Bulls, 1 to 10 mo. old. Sires, Langwater Foremost, Glen Gable Friendship, 3 sired by son of Glenwood's Buttercup, 769 lbs. fat at 3 years. H. B. SHENK, ELVERSON, PA.

SUNNYBROOK GUERNSEYS
40 head, free of tuberculosis, bull calves for sale.
EDWIN B. MAULE, COATESVILLE, PA.

HOLSTEIN FRIESIAN HEIFER AND BULL CALVES Purebred registered and high-grade. Price $20 up. Splendid individuals and breeding. Write us your requirements. BROWNCROFT FARMS, McGraw, N. Y.

JERSEY BULL CALF, 9 months old, bred at the top. Pedigree furnished on application. Anselm B. Kirsch, Highland Stock Farm, Nicktown, Pa.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale.
MILLARD E. BASEHOAR, Littlestown, Pa.

Reg. Holstein Bulls from calves to serviceable age. Herd tuberculin tested under Federal and State supervision. BONNYMEADS Farms, Harrisburg, Pa. R. 6

MILKING SHORTHORNS, sons of Glenside Royal Stamp, grandsons of General Clay; also a few females. C. M. KENNEDY & SONS, ULSTER, PA.

CALF BORN JULY 6th. Guernsey bull, Dam A. R. 7 May Rose crosses, at $75. Locust Lawn Farm, Bird-in-Hand, Box P, Lanc. Co., Pa.

REG. SHORTHORNS FOR SALE. Cows with calves; heifers, bred and open; also some choice young bulls. Farmers' prices. R. H. LYLE, CADIZ, OHIO.

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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880
PUBLISHED WEEKLY

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Number 10

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Volume 48 PHILADELPHIA, PA., SATURDAY, SEPTEMBER 4, 1920 Number 10

Poultry Club Work for Boys and Girls

How Well Directed Club Work Returns Profits and Knowledge to Members

By Jos. W. Kinghorne

U. S. Dept. Agriculture

It has only been in comparatively recent years that poultry production has been recognized as a valuable national asset, and likewise as a very important part of the operations of the farm. One of the important factors which has been instrumental in bringing about the realization of the importance of the poultry industry is the establishment of poultry clubs among the boys and girls. Poultry keeping was formerly considered a minor branch of farm work, and that it was purely an activity for adults, with the development of other forms of agricultural clubs among children it was found that there was a very definite place for clubs having for their obect the production of poultry. In 1912 this project was formally launched by the Federal Department of Agriculture in the State of Virginia.

The poultry club work was founded at first on a very small and conservative scale; in other words, it was launched very largely as an experiment to ascertain its popularity and practicability. Thus, at the end of 1913, with the success of the work as it was carried on in Virginia in three counties with 150 members, those who were in a position to know and to observe the results concluded that this form of club work had wide possibilities for effective results.

Studying Bird With View to Exhibiting Him at Show.

How the Clubs Were Organized

The object of this work being to improve farm poultry and to place the industry on a higher plane, such improvement was invariably started by organizing clubs among the children in the schools and educating them as to the proper and most practical methods of poultry management. Standard bred poultry was and still is the fundamental principle upon which these organizations were founded; that is, it was the ultimate idea to so interest and encourage the members that they would dispose of their mongrel flocks, which were by far in the majority, and raise only standard bred poultry and thus secure the increased returns and benefits that such stock would bring. Furthermore, the members were encouraged to improve their poultry equipment to such an extent as could be accomplished without the expenditure of any great amount of money. Consequently, practically the only investment that the members of these clubs had to make was in purchasing one or more settings of eggs of purebred stock. Thru the cooperation of local poultrymen reduced prices for such eggs are usually obtained, thereby reducing the initial expenditure and amount of capital needed to a minimum.

The Poultry Club Specialist

In each state where this form of club work has been inaugurated by the Department in cooperation with the State agricultural college a poultry club specialist has been located to foster such work. In every instance these specialists have been thoroly practical poultrymen and able to impart their knowledge in a practical way. These agents devote their entire time to such organization work and act as subject-matter specialists in disseminating such information as is necessary to carry on the work. Thruout the year each of the agents in charge assists the members in every possible way by means of instructive talks before representative clubs, by giving demonstrations, impressing the fundamental principles and by visiting the members' homes, giving such information and demonstrations as can be practically applied in each case.

Subject Matter Material Furnished

Each member enrolled in the poultry club is supplied with a full set of bulletins on poultry, together with a report book on which he is instructed to keep a definite and detailed account of all his work, thereby showing accomplishments and results. When properly filled out these reports show at the end of a season a complete record of all the member has done during the club year. The object of these requirements is not only to place before the member a record of activities so that he can see his own shortcomings, but, also, when correctly kept, to give the state and county leaders an opportunity to point out such defects with a view to correcting them in future work.

Community Breeding Work

In several of the counties where poultry club work has been in progress for several years, an effort has been made and success secured in establishing a community breeding organization, both among the children and their parents. This plan of organization has been in effect for several years, and during this time it not only has been proved practical but has met with considerable favor in each section where started. The object of this form of organization has been to secure in a community an association that will devote all of its efforts to breeding and raising one specific variety of poultry. It is obvious that when such practice is followed each member will be a better breeder of the breed selected by the club in that each one will be closely associated with his fellow members, and therefore the experience of each member in breeding and raising the community breed will become common knowledge. Furthermore, such organizations establish a center which is in a position in many cases to furnish a uniform product of high quality whether it be market eggs or fowls or breeding stock in its several branches.

School Poultry Plants

Numerous instances can be cited wherein high schools and graded schools have established in connection with their regular curriculm a course in poultry husbandry and managing a poultry plant on the school grounds so that the children can take an active part in the improvement of the school flock. This system not only creates an interest and knowledge among the children as to the importance of poultry keeping, but in almost every instance acts as a community poultry center, placing before the patrons of the school

(Continued on Page 10.)

AMERICAN FARM METHODS IN ARMENIA

American farm methods bid fair to conquer the world. Their latest field of conquest is the Near East where for the past two thousand years the inhabitants have been faithfully following the motto: "What was good enough for Noah is good enough for me." But American agricultural experts, under the jurisdiction of the Near East Relief, America's official organization for relief in Armenia, are showing the farmers of the Near East that while they may have no new ideas on conducting a forty-day tour of the Ark, they have some suggestions for improving Noah's method of tilling the soil.

Whereas the Armenians, who are essentially an agricultural people, have ploughed their fields with oxen-driven wooden ploughs which require eight or nine teams with a driver for each team and a "whip" for the whole equipage, the Americans come over with their western farm machinery and cover six times the amount of land that the natives do with the employment of only one third the number of "hands." If American methods meant nothing more than this saving of labor they would be invaluable, for the massacres and deportations and the present need for fighting men have so cut down the man power of the region, that it is altogether impossible to obtain the needed labor to farm the land according to the time-honored native customs. Thousands of acres of the most fertile soil have gone uncultivated because they have not had the laborers to work it by their primitive methods. The introduction of only a few American tractors means the saving of large districts of lands.

If American tractors are used it is obvious that American ploughs and reaping and threshing machines must also be used. To hitch up their wooden ploughs to American tractors would be impossible. As for threshing, the Armenians are still employing muzzled oxen to trample the grain, a ridiculously inefficient and inadequate way of taking care of such a harvest as would result from following the American methods of planting.

At present only a very limited amount of American machinery has been brought over. The Armenians themselves have no money and the only means they have of obtaining our farm implements is thru the the Near East Relief, which is donating all of the funds which it can possibly spare to the purchase of tractors and ploughs, reapers and threshing machines. Thousands of bushels of seed have also been shipped over from America for the scarcity of seed in these devastated districts is naturally very great.

That it will be due to American methods of agriculture in very large measure that Armenia as a nation—a self-supporting and prosperous nation—takes its place in the world, is evident from the most casual survey of the situation. Armenia has vast, uncultivated agricultural districts. Once given American farm implements and schooled in American methods so that he may cultivate these fields, the Armenian farmer will not only free himself from the necessity of asking or accepting charity from outside, but he will be giving a large supply of produce to the world much needed in famine stricken Europe and Asia Minor. So once more American genius, tho in a far land, helps to feed the world!

An Armenian Plow; the Kind Still Used

TIMBER DEFICIT OUR OWN PROBLEM

By Gifford Pinchot, Chief Forester of Penna.

Pennsylvania's timber situation is Pennsylvania's own problem. We can not "pass the buck" to the rest of the country or the rest of the world, because we have the land for producing all the timber we need. The 5,000,000 acres of what is now Pennsylvania's Desert can be and should be —growing timber all the while it is furnishing timber.

A shortage in most staple crops can be made good in one year but timber is a long-time crop. To mature a timber crop requires from 50 to 100 years, or more, and no urgency of need nor amount of money and effort can shorten the period. Within less than fifty years, at the present rate, timber shortage in the United States will have become a blighting timber famine.

Pennsylvania's duty is to begin now the policy of timber production and timber conservation which will restore its woods to their former value and insure the people of the State against the evil day of timber famine which we know to be not far ahead.

Pennsylvania should own most of the land fit only for growing trees because: The care and attention which the state as such can and will give is greater than the care and attention a private individual or corporation can and will give; the timber development of the state affects every other industry and is, therefore, a people's question; the state as such must supervise the cutting of trees if the forests are to continue.

Privately owned timber must have protection from fire and careful supervision to protect it from devastation. The present timber and wood pulp shortage has developed out of the existing practice of lumbering, which is based on the careless assumption that "we have timber enough to last." Under past and present lumbering practice, mature crops of native timber have been harvested wholly without regard to succeeding crops. No provision has been made for the starting of new forest growth, for protecting it from fires which follow lumbering, nor for the care of young timber. No effort has been made, by private concerns, to keep forest lands growing timber. As a result, lands which have been at work, century after century, producing forests that maintained and renewed themselves without care or cost, are transformed by lumbering into non-productive wastes of blackened stumps and bleaching snags.

Plowing Is Done in Armenia As It Was 500 Years Ago

MY TRUCK AND TRACTOR FACTS

Entered in my dairy, under date of April 4th, is the following statement: "Made a trip to town (Philadelphia) for cow feed and new lime spreader. Came home and plowed field next to orchard, six acres."

Just a plain statement of facts entered in a matter of fact way and yet a few years ago it would have sounded foolish, to me.

One fact is at once apparent: Horses were not a factor in this day's work. With a team I would have been three fourths of a day making the trip to town. And it would have taken about four days to have plowed the field mentioned. In other words four and three-fourths days work was accomplished in one day and another point rarely dwelt upon is this; I did it easier and the field was plowed better.

This is the third, and most successful year for our tractor. This spring I plowed 35 acres in seven days, six acres of which was an old alfalfa and tough wild-grass sod which I had to plow with two bottoms instead of three, and I disced the sod twice, or twelve acres, in one day.

This is an average of only five acres of plowing a day, and the tractor manufacturers advertise "an acre an hour" but I cant do it with hillsides and rocks to contend with. I am well satisfied to average five altho I have plowed six acres in seven hours but that was on my best piece of plow land.

I append a statement of my tractor expenses for plowing the 35 acres not including my own time and depreciation:

Gasoline (for starting only) 5 gal.	$ 1.55
Kerosene, 150 gal.	30.00
Lubricating oil, 12 gal.	10.20
Repairs (clutch trunion and P. P. chgs.)	96
Cup grease	1.00
Total	$43.71

—H. H. CAUM,
Bryn Mawr, Pa.

INSPECT THE SILO BEFORE FILLING

Before filling is started, the silo should be examined for openings in the walls where air might enter and spoil the silage, and for rough places which might prevent proper settling of the corn. The hoops on stave silos should be tightened sufficiently to close all cracks, but they should not be tight enough to buckle the staves. The staves will absorb some moisture from the silage and the hoops should be released somewhat a few days after the silo has been filled to prevent the swelling staves from buckling or breaking the hoops.

The walls of concrete silos should be inspected for cracks, and pockets, and rough places. If the surface of the wall has become roughened a thin coating of rich cement will make them smooth. Metal silos may be prevented from corroding by an application of paint.

A careful inspection of the cutter, engine and corn binder previous to starting work will sometimes save unnecessary stops and repair bills. All machinery should be put in good running order, and enough teams and wagons provided to keep the cutter running steadily.

MACHINERY OFTEN WEAKENED BY RUST

Many a piece of farm machinery is broken in use, at a busy critical period, because the part has become weakened by rust.

All farm machinery should be kept painted. Reduce breakage to the minimum. Parts will break often enough when machines are handled with the utmost care, but just now when replacements are so expensive and so difficult to get promptly regardless of price, the least the farmer can do is to guard against this unnecessary weakening of essential equipment, by allowing rust to set in on it.

It takes very little time to apply paint and the cost is nothing compared to the loss of several days use of an important machine at a critical period in planting, cultivating or harvesting time

---

Of course you enjoy working in the home garden; but remember the men folks will enjoy the crisp cucumbers, tender peas and snowy cauliflower as much as you will, so let them do some of the hard work.

County Exhibits at N. Y. State Fair

By E. C. Weatherby

Cayuga County, New York

One of the big features of the New York State Fair is the County exhibits. They are unique in that they stimulate a county interest and add an educational feature that is helping to develop the agriculture of the state.

Live Stock Exhibits

A special effort is being put forward by the live stock division of the Fair in order that the county live stock exhibits will be at their best in 1920. Four years ago Otsego County set the example by bringing the leading dairy breeds of that county. Then the basis of award was for the largest and best exhibit. The following year a recommendation was transmitted to the Fair Commission asking that the number of animals in the exhibit be limited to 15. This was done in order that more counties might compete and the desired results were gained the following two years. This year a total of $2200 is offered for county exhibits of the following breeds; Holstein, Guernsey, Jersey, and Ayrshires. Many counties which have not shown before are contemplating showing this year.

Already 65 Holstein herds in St. Lawrence County have been visited by the County Committee in order that the exhibits may well represent the herds of the county. Madison County is going to be a close competitor for the prize in the Holstein class. The recently organized New York State Holstein Club is assisting in making the Holstein exhibit the best.

Agricultural Exhibit

In 1917 there was started a county agricultural exhibit; this exhibit to represent the county's agriculture. The first year it was a success and has been improving every year. These exhibits have been arranged by the County Farm Bureau Associations and the splendid quality of produce shown and attractive arrangement has been a drawing feature. In 1917 Cortland County won 1st; Orange County, second, and Cayuga County, 3rd. In 1918 Ontario County won 1st; Cayuga County, 2nd, and Madison County, 3rd. In 1919 Cayuga County won 1st; Chemung County, 2nd, and Steuben County, 3rd. $250 is given each county that arranges an exhibit,—$150 is prize money and the other $100 allowed for transportation expenses of the exhibit to the fair.

In judging the exhibit the Fair Commission gives the following basis of scoring:

1. Correctness with which the exhibits typify the agriculture of the county, 40 points; 2. Quality of material exhibited, 30 points; 3. Educational features of the exhibit, 10 points; 4. Decorative arrangement, 10 points; 5. Diversity of exhibitors, 10 points. Total, 100 points.

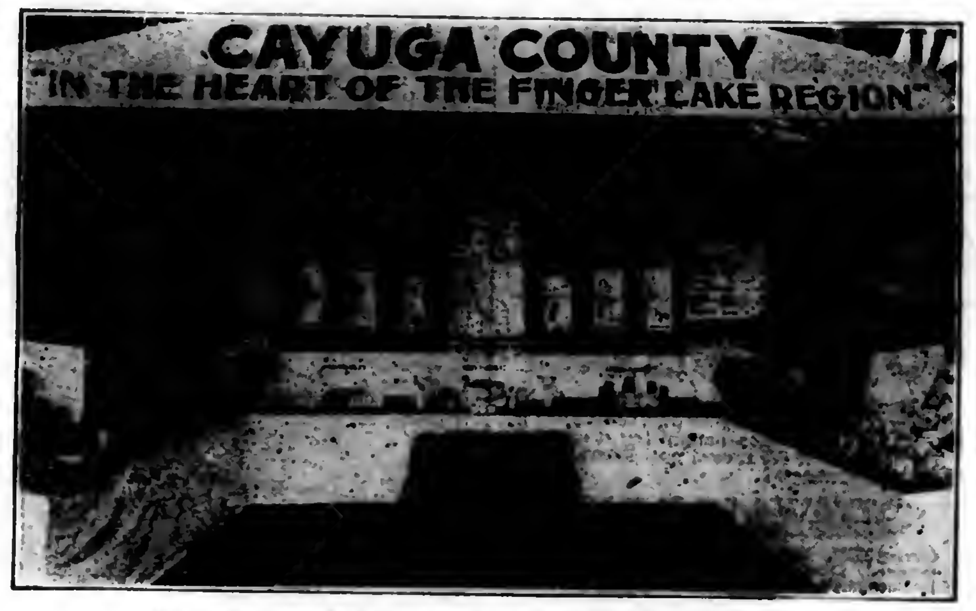
Fruit Exhibit

One of the most attractive sections of the horticultural building is that which is devoted to the county exhibits of fruit. Here the leading fruit counties of the state compete. In the past Orleans County has been a successful winner. However, in 1919 Ulster County's splendid exhibit arranged by the Farm Bureau captured the prize.

Sheep and Wool Exhibit

Last year a new feature was added in the offering of prizes for county exhibits of sheep. These exhibits contained ten animals of each breed and prizes of $30, $25, and $20 were offered. This year to supplement the sheep exhibit, there will be for the first time a New York State wool show. This show is divided into two classes, exhibits arranged by county wool associations and individual exhibitors classes. In the county exhibits three fleeces of the following grades of wool will be shown: Merino, delaine, ½ blood, ⅜ blood, ¼ blood, and coarse wool. Prizes of $20, $15, and $10 will be given. In the individual classes the same grades of wool will be shown and prizes of $10, $8 and $6 given. A total of $1164.00 is offered in these exhibits which compares favorably with other departments.

The idea of stimulating this type of exhibits is making the New York State Fair more representative of the agriculture of the state. It is also stimulating the farmers interest in it.



Farm Bureau Exhibit in N. Y. State Fair, 1919

Soils and Fertilizers

Conducted by Dr. J. G. Lipman

Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

WANTED: A NATIONAL SOILS POLICY

Age is no respecter of persons. Neither is it of soils. But soils have a way of regaining their youth. With the help of man they can redeem their lost strength and grow stronger even as they grow older. To man has been revealed the secret of soil immortality; the secret of plant food supplies; the secret of organic matter passing thru successive stages of decay; the secret of the invisible life in the soil, its bacteria, fungi, yeasts and protozoa. And so, out of the experience of generations, out of the studies in the field, greenhouse and laboratory, there has come to us a sustaining knowledge of plant life and of soil fertility. It is no longer necessary for the owner of impoverished acres to leave his home and to wander restlessly in search of land that had not yet parted with its virgin productiveness. The resources at his command include vast supplies of phosphates, potash, lime, sulfur and nitrogen salts; they include green manures, inoculation, drainage, irrigation and tillage. With these and others at his disposal he can afford to ignore the persistant and insidious work of leaching and erosion, the escape of some of the plant-food elements back to the air, and the constant removal of plant-food in the crops and animals sold off the farm.

It is estimated by F. W. Clarke of the United States Geological Survey that every square mile of our land is annually losing, on the average, 87 short tons of dissolved mineral matter. In the North Atlantic drainage area with its relatively large rainfall the rate of solution is more rapid, namely, at the rate of 130 tons per square mile per annum. Clarke estimates also that, at this rate of solution, or chemical denudation, as he calls it, the surface of the United States, exclusive of the Great Basin, would be lowered one foot in 23,984 years. The meaning of these figures will stand out more clearly, perhaps, if we remember by way of example that the rivers of North America carry away annually about 10,000,000 tons of potash in solution. But the loss of soluble salts is only one way whereby the productive power of the land is lowered. Losses fully as serious arise out of the removal of fine particles of clay, silt and sand in suspension. The Mississippi River alone is estimated to deliver annually to the Gulf of Mexico about 370,000,000 long tons of suspended matter. But the air, as well as the ocean, claims its toll. Many thousands of tons of nitrogen, carbon and sulfur escape in gaseous form from the land to the atmosphere.

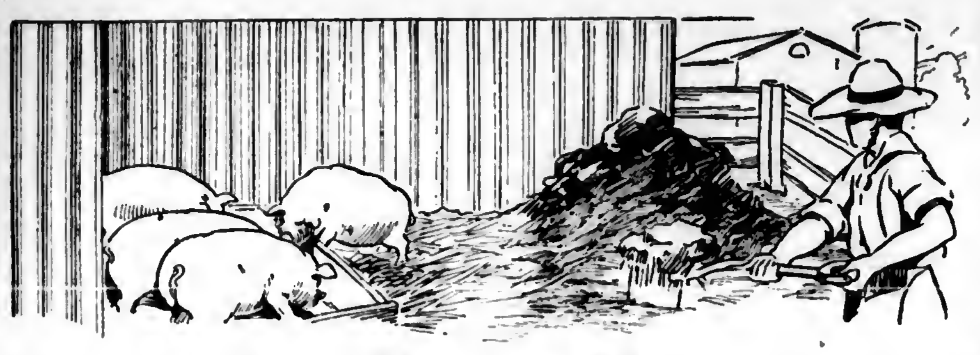
The land is our greatest national asset. It lies in our power to protect it against erosion, and, to a large extent, against unnecessary leaching. It lies in our power to develop our lime resources and to establish reasonable freight rates in order that the excessive losses of mineral plant food from acid soils may be materially reduced. It lies in our power to establish a broad and intelligent policy for exploiting our phosphate rock deposits which, vast as they are, are not inexhaustible. Our fertilizer industry is even now one of national magnitude and importance. It represents a capital investment of more than $300,000,000; owns and controls nearly 1200 plants and has an annual output of 7,000,000 tons of material. It contains many elements of progress, but it is not free from the temptation of taking immediate profit at the cost of ultimate loss to the industry and to the Nation at large. There is need of the most careful survey of the industry from the standpoint of the present and of the future. A definite national policy as to exports and imports of fertilizer materials is needed no less than a policy relating to the use of low grade materials and their cost to the consumer.

The development of our water-power and fuel resources for the manufacture of so-called air nitrates can be best dealt with in a national way. This is also true of certain types of investigations whose purpose it is to reveal more effective and more economical methods for the manufacture of fertilizers, or the change of insoluble into soluble forms of plant-food. The manufacture of ammonia from air nitrogen by means of the Haber process; the production of liquid phosphoric acid by means of the electric furnace; or the domestic manufacture of potash salts may be mentioned in this connection. Moreover, it may not be amiss to point out here that much of our soil research is too local in character and not calculated to uncover the broad principles that pertain to the maintenance and increase of soil fertility. The situation calls for a broader outlook in our soil fertility investigations, and for a greater degree of cooperation among our experiment stations, our colleges and the Federal Department of Agriculture. The situation calls, also, for a more intensive propaganda in behalf of rational methods of soil management, of drainage, tillage, and the conservation of farm manures. A national institute of soil fertility might prove to be a profitable investment.

Finally, we should bear in mind the protection of our soils thru legislation that would compensate tenants for the unexhausted residues of manure, lime and fertilizer. The English Board of Agriculture has dealt with this subject in a progressive way. Tenants who apply manure, fertilizer and lime and move off the farm before their crops have secured the full benefit of these applications are entitled to compensation from the land owner for the plant-foot residues in the soil. This encourages the tenants to manure and fertilize their land generously in the knowledge that their investment will be returned to them in full. Some day we shall attempt to hold out the same inducements to renters of American farms.

Theodore Roosevelt once said: I know not how philosophers may ultimately define religion, but from Micah to James it has been defined as service to one's fellow man rendered by following the great rule of justice and mercy, of wisdom and righteousness.

Lye solution will kill mites in the hen house, and sodium fluorid gets the lice.



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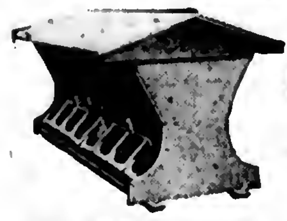

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Uncle Sam's Hired Men

How George Livingston is Trying to Help the Farmer Solve his Marketing Problems

George Livingston, Chief of the Bureau of Markets, has but two eyes —being just an every-day human being—but his friends says that his vision is far reaching. It has to be good to see all sides of the big farm marketing problems of today and then to look after 100 field offices distributed thruout the United States as well as to direct the activities of some 1330 employees who are trying to solve them.

At twenty-nine G. L. was an authority on grain and grain marketing. He had graduated from the Ohio State University and thereafter spent five years specializing in agricultural and marketing methods in the capacity of instructor and assistant professor at various universities. His post-graduate course at Cornell University subsequently led him to Europe to study agricultural practices there. Then he joined the Bureau of Markets. His executive ability and genius for organization were soon recognized and four years later he was appointed chief of the bureau.

George Livingston, Bureau of Markets, Inspecting Wool Grades and Standards

For more than half a century agricultural experts and agencies have devoted almost their entire attention to production problems. But these experts are now agreed that the question of marketing is of equal importance, and that the present marketing system is wasteful and inefficient in many spots. They say that with the present methods farmers lose millions of dollars annually. More important than that is the economic waste caused by the quantity of food actually lost.

It is only comparatively recently, however, that any organized effort has been made to develop the machinery of marketing to meet the Nation's requirements. And with the United States leading the world in the maintenance of a government agency to study and devise new marketing methods, economists and students of food distribution problems everywhere are watching closely the results secured by the Bureau of Markets and the man who directs its activities.

Mr. Livingston considers that the standardization of farm products and the containers in which they are packed is fundamentally the most important work being performed by the bureau; a work that is basic to all improvement in marketing, for without established standards and grades there is no recognized basic for buying and selling; no common language by which the parties to a transaction may understand each other; no uniform standard of quality upon which values and prices may be based.

Another important factor in marketing is the Food Products Inspection Service established by the bureau, by the use of which shippers and others interested can obtain certificates attesting the condition of their perishable products received at cetnral markets; a service that facilitates the distribution of the products covered, hastens the release of cars, lessens deterioration and waste on account of delays resulting from disputes as to the condition of products, and prevents unfair trade practices.

Then there is the organization of farmers' cooperative associations—permanent, economic institutions that have a far-reaching effect. There are now more than 14,000 farmers' cooperative associations in the United States, in the organization of many of which the bureau was called upon to lend assistance. A staff of experts is maintained to study practical methods of cooperative marketing and to place the results in the hands of the farmers.

"The Bureau of Markets is endeavoring to devise the quickest, most direct, and least expensive methods of getting products to market," he said. "Slip-shod methods must go, for the new methods will be better."

All chickens they see at the meat market look alike to some housewives. Others know that soft cartilage at the end of the breast bone and plenty of pin feathers are indications that the chicken is entitled to the name. Long hair, and hard dry scaly feet give warning of age

WHAT FARMERS SAY ABOUT TRAILERS

Twenty-one farmers who use trail- s with their passenger automobiles or hauling purposes have answered uestions addressed to them as to the se they make of their trailers and hat advantages they get from them. The following summary of the re- ies should be of interest and value o other farmers thruout the country.

The inquiries related only to small railers for use with passenger cars, whereby the runabount or touring ar is made to serve the double pur- ose of a general utility passenger ehicle and a light truck. The farm- ers are located in ten counties and ll use two-wheel trailers of 800 to ,000 pounds capacity, fitted with oller bearings and mostly with solid ubber tires, altho two have pneuma- ic tires, and two steel tires. Regard- ng the latter, one owner says his ailer is home made and the steel res do not stand up under the ain.

The length of haul to market rang- from 2½ to 36 miles, the average ing a little more than 18. Roads nclude dirt, clay, sand, gravel and ement and are mostly level, tho five armers reported the roads hilly and our others that there were some ills. Farms varied, the average ze being nearly 100 acres. Some wners overloaded their trailers, the eaviest loads hauled being 1,400, 500 and even 2,000 pounds on 1,- 00-pound trailers in some cases and 400 pounds on 1-ton trailers in two ther cases. Half of the owners sely never overloaded.

A great variety of products and ticles are hauled in the trailers. These include fruit, vegetables, ain, poultry, eggs, meat, live cows, lves, pigs, and sheep, seed, feed, oceries, lime, cement, spray mater- l, trunks, tools, binders, mowers an her machinery, fencing, etc. One rmer reported hauled 2,500 bush- ls of potatoes in his trailer.

Thirteen of the automobiles used r drawing the trailers are of 22 sepower and are no doubt of one ll known make. Others are of 25 35 horsepower, and two of 45. tteen farmers said the trailers do harm to the cars, three that they dn't think they did any, two that cars use more gasoline—which is be expected—and only one that trailer "may" do some harm.

Three of the farmers have been ing their trailers for six years, two r five years, eleven for four years, d three for three years.

Estimates of the "life" of the trail- ranged all the way from three ars to twenty, three didn't know d two did not answer.

Unanimous testimony of the users that the trailers give them more me on the farm and that they ould recommend that other farmers y trailers. Fifteen said that their n products were delivered better trailer than by wagon.

CROP OUTTURN AMPLE

The governent report of August 1 ggested a winter wheat yield of 3,000,000 bushels, and of spring heat 262,000,000 bushels, making a otal of 795,000,000 bushels compar- with 941,000,000 bushels last ar and an average for the five-year riod, 1914-1918, of 822,000,000 ls. With a carryover of about 60,- 00,000 the total in this country is out 855,000,000 bushels, which is uch larger than was thought possi- early spring.

Unhitching the horses by the light of a Western Electric Lamp

There was once a man called "farmhand"

"If farmhands grow much scarcer, we will soon forget what the word means. Help is certainly hard to get. But I have found help in another form—an electric power and light outfit. I want to tell you what these plants can do for you, and some of the things they can't do."

H. J. Bowman

Editor's Note: *Mr. Bowman's farm is located near Ames, Oklahoma.*

"NOT being able to get any steady help, I have been doing most of my work myself. It worried me to think that every hour I spent milking cows, turning a grindstone or chopping wood was just so much time taken away from necessary work in the fields.

"Last spring I became interested in the question of a farm plant. But I delayed buying one, because those I first saw were not much more than lighting plants. They didn't show up well in a power test for heavy work.

Carry the motor right to the job you want done

"Now my idea of a piece of farm machinery is that it must be useful first of all.

An outfit that does a man's work

"I kept on looking till I found the plant that came nearest to satisfying my need for power — A Western Electric Power and Light Outfit. I'm not saying that this outfit can mow the hay or do any plowing. But it certainly is doing some real, honest-to-goodness work for me, saving time and labor.

"In the first place the Western Electric Outfit has an engine that can operate pretty near all the machinery on the average farm. It runs my fanning-mill, feed-mixer and milking machine.

"Then with the generator and batteries in action—or the batteries alone—I let electricity milk the cows. The utility motor, which I can carry around and connect to any lamp socket, is mighty handy for such jobs as running the churn or the grindstone, or in fact, turning any machine I used to turn by hand.

"All this means time saved—and time is money when a man is in the middle of his planting or harvesting."

Long life to your battery

You may be interested to know that the engine to which Mr. Bowman refers is of the dependable valve-in-head, air-cooled type, burning gasoline or kerosene.

The battery lasts long because of the famous "tapering charge", a Western Electric feature. An automatic control very gradually decreases the rate of flow as the battery fills, till the current stops gently by itself. This takes all strain off the battery.

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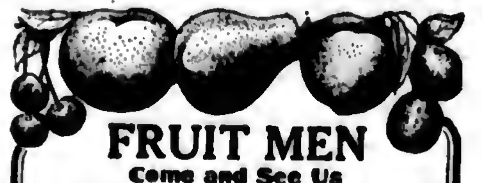

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PHILADELPHIA, PA., SEPTEMBER 4, 1920

VOLUME 48 — NUMBER 10

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Additions to Editorial Staff

WE ARE SURE our readers will be as pleased as we are over the fact that we have secured the men whose names appear above as "Contributing Editors" to Pennsylvania Farmer. These men will write regularly upon subjects which they have spent their lives in studying and practicing, and are able to give the best advice obtainable upon their various subjects. They are all well and favorably known and we are sure their many friends will congratulate us and our readers that their counsel will appear every week in Pennsylvania Farmer.

This step is in keeping with our unceasing efforts to continually improve the paper and make it indispensable to the modern, up-to-date farmer. A farm paper ceases to be a safe guide or in any ways helpful when it stops growing and improving. In order to be worthy of confidence it must have a corps of writers who thoroly know their subjects and who are in sympathy with farm life and the business of farming. Not only were the contributing editors chosen because of this quality, but we demand the same of all our writers. Our long list of occasional writers is composed of men and women who know the seamy side as well as the pleasant side of farm life.

On the opposite page will be found a picture and a brief biography of each of the contributing editors. We want our readers to feel free to send us their problems on soils, fertilizers, horticulture, livestock, etc., and we will send them to the proper authority for answer. It must not be understood that these men are to do all the writing on these different subjects. We invite others to write their views and experiences as in the past, as we are always on the lookout for new material, especially that which has the smell of the soil about it.

$3.00 Wheat (?)

THE FARMERS of the wheat growing states of the Middle-West have started a movement for $3 wheat. The leaders of the Farmers Union and Farmers Club of Kansas, Oklahoma, Nebraska and Missouri held a conference and issued a statement, calling upon all wheat growers and farmers organizations to unite in this movement. The following are extracts from the published statement of the conference held:

"On behalf of the nearly 200,000 farmers who belong to the Farmers Union in Kansas, Nebraska and Oklahoma, and to the Farm Clubs of Missouri, we hereby lift our united protest against the recent manipulations of the American Wheat Market—a performance, which has forced a decline of more than [illegible] per bushel in the space of a few weeks, and which we regard as one of the most unfair manipulations of the kind in the history of the American Grain Market. * * *

"The following summary has been prepared on this basis of yield from farm records obtained in Kansas, Nebraska, Missouri and Oklahoma:

Man labor, 11 hours at 50c	$5.50
Horse labor, 22 hours at 20c	4.40
Machinery cost	1.50
Twine cost	.69
Seed cost	3.10
Threshing, 13 bu. at 20c per bu.	2.60
Hauling to market, 5 miles at 6c per bu.	.78
Interest on seed and seed bed	.60
Crop risk (seasonal variation)	1.50
Insurance (hail and fire)	1.00
Cost per acre, except use of land, ...	$21.67

"The average yield being 13 bushels and the average tenant paying on an average two-fifths of the crop for rent, he has remaining for sale or seed 7 8-10 bushels. The actual cost of producing the grain sold is therefore $2.77 per bushel. If a man owns his farm he must consider interest on money invested in land, taxes, annual building cost, insurance, depletion of soil fertilitty and other miscellaneous items, which items are to be covered by the two-fifths of the crop received as rent. * * *

"To the farmers of Kansas, Nebraska, Oklahoma, Missouri and of the Grain Belt generally we say that the time has come for a "show down"—that a surrender on wheat means a surrender on corn, hogs and cattle a litter later on—and that thus with our backs to the wall the hour has come when we must fight and we therefore appeal to every farmer who has not yet disposed of his wheat to hold the same for a minimum terminal market price of $3 per bushel."

It is customary for those who question production figures to point to instances in which the yield per acre is much above the average, and claim that it is a moral duty of farmers to produce more per acre and that they should not expect to receive a price that would return a profit until they do. We grant that farmers in connection with all others should study to increase efficiency, but it must be borne in mind that the prices received for wheat up to this time have never been such as to leave a profit which could be applied to maintaining and increasing fertility. The impoverishing market prices obtaining during the past 50 years have been the cause of the gradual impoverishment of the soil in the great wheat-growing regions. If wheat growing in these sections must be abandoned this country and the world in general will go hungry, since the great bulk of our wheat is produced on 13-bushel-per-acre land—not where 25 bushels are produced.

If the costs of labor and transportation, taxes, manufactured articles, etc., are to remain at a high level it is logical and just that wheat and other farm products must stay up, else farmers cannot and will not produce a surplus.

The Triumph of Women

BY THE SIGNING of [illegible] proclamation of ratificatio [illegible] of State Colby placed the official seal of victory to the long and persistent fight of the women of this land for equality of citizenship. Thus, within the same twelve months, the women of America have seen the successful termination of two battles for justice and decency which for three generations they fought almost alone—equal suffrage and prohibition. Years ago, they had the prophetic vision and the undaunted faith to prophesy success in both issues in 1920. Of course, the doubters and scoffers, mostly the men but some among their our number, said it could not be; that it was impossible to change the foundations of the government or legally interfere with the long established habits of men. But woman, being by nature the conservator of the race, knows no such thing as cessation of effort in the defensive fight for her children and her home. If Kipling had this sentiment in mind when he wrote the words, "The female of the species is more deadly than the male," he was right.

Of course there are individual exceptions. There are moral degenerates among women as there are among men. There are those who will not add one whit to the weight on the moral side of the scale of justice, but they are in the minority; man is not thinking of women derelicts when, in his better moments, he pays his heartfelt tributes to women and womanhood.

Farmers' organizations, and most especially the Grange, recognized the equality of woman years ago by admitting her to equal membership. Years ago the Grange, in most instances, espoused the cause of equal suffrage. The Woman's Christian Temperance Union has long had a department devoted to suffrage. The Socialist party has always had a plank in favor of it. The Progressive party in 1912 declared in strong terms for equal suffrage. A few religious organizations have given the movement official sanction for some time. With all due respect for the tireless workers of the present generation whether male or female, the race owes a debt of gratitude to those heroic women of past generations who, thru ridicule and persecution, stood almost along in the pioneer days of the movement—Lucretia Mott, Elizabeth Cady Stanton, Julia Ward Howe, Susan B. Anthony, and others.

The woman voter is an unknown quantity to the Eastern politician. He is uncertain and somewhat fearful as to just how far her sentiment, her sense of right and her natural independence will influence her in exercising her franchise. No doubt it was for these reasons that the majority of the professional politicians and party leaders fought the suffrage movement so bitterly up to the time its success was imminent. These men are still dominant in party affairs and it will be some time before the influence of women in national politics will be seen to any great extent. Her part in the job of national housecleaning can not be really commenced until the broom is in her hands; at present, it is in the hands of her opponents.

Our Washington Letter

The proposition to establish by act of Congress a co-operative system of rural credits based on personal security is receiving the endorsement of many well known farm leaders. The National Society of Record Associations thru its secretary, Wayne Dinsmore, who is also secretary of the Horse Association of America, has appointed a rural credits committee composed of F. L. Houghton, secretary Holstein-Friesian Association of America; Frank W. Harding, secretary American Shorthorn Association; Wm. H. Caldwell, secretary Guernsey Cattle Club; Robert J. Evans, secretary Duroc-Jersey Association, and himself, to prepare a rural credits bill to be presented to the Congressional Rural Credit; committee created by the recent Agricultural Appropriation act. Mr. Dinsmore has petitioned the chairmen of the committees of Agriculture, Banking and Currency of both bodies for a judicial hearing on the bill to be presented by the committee of the National Society of Record Associations, and has asked that September 1st be designated as the date when bills may be presented to the committee and that October 15th be designated as the last date at which defenses may be filed by the interests which would be adversely affected by such bills, should any become a law. The hearings before the House and Senate Committees will begin on November 8.

The Rural Credit Committee of the Record Society are agreed on the principles of the McFadden bill and have engaged R. C. Milliken, a Washington monetary statistician, as an expert to prepare a bill to be presented to the Congressional investigating committee and appear before them to establish its merits.

"Nothing could be fairer," says Mr. Milliken, "than the hearing which the Record Association has asked for, for it gives every interest affected an opportunity to appear before the Congressional investigating committee by an expert of its own selection and point out the defects of the bills presented by the farmers and stock raisers. This would force those adverse interests into open court to point out any objections they may make to such bills. But the farmers and stock raisers will have to meet the adverse interests, banks and insurance companies, either in the secret lobby or open court, and the farmers and stock raisers had best meet them in open court than attempt to do so in the secret lobby."

* * *

At a recent meeting the National Board of Farm Organizations appointed a committee to investigate the importations of vegetable oils and and certain other farm products and their effect upon American farm products in the home markets. These include cotton and corn, large quantities of the latter product being imported from the Argentine, according to C. D. Holman, chairman of the committee. At the September meeting steps will be taken by the committee to co-ordinate the work of all the farm organizations and various other interests concerned, so as to be able to give a uniform and logical presentation of the case before the Tariff Board and the Congressional committees. There are now coming into this country from foreign ports many millions of pounds of vegetable oil products, including 258,229,102 pounds of copra, 133,212,423 pounds of peanuts, mostly shelled, 269,226,966 pounds cocoanut oil, 22,064,363 gallons of peanut oil, and vast quantities of soybean oil and cottonseed oil which are used in the production of oleomargarine and other butter substitutes, lard compounds and the like, all coming into direct competition with American cottonseed, butter and other animal products. The bulk of this stuff comes from the Orient where costs of production are small, the

work being performed by cheap Coolie labor. It comes into direct competition with the products of the stock and dairy farms in this country and it is the belief of the committee that the time has arrived when means should be provided for protecting the dairymen and stock raisers from this foreign competition.

* * *

Treasury department officials report that they are receiving information from districts having large textile interests that there will be an early resumption of activities in these industries. Reports of manufacturers, they say, show that mills that have been idle will start again early in the fall. Nevertheless, they are predicting still lower prices on wool and woolen goods. As evidence of this they point to late repors showing more wool in the world today than ever before, and cancellations of orders, together with return of goods to the woolen mills having reached as high as $200,000,000.

* * *

The capitalization of the United States Grain Corporation has been further reduced from $150,000,000 to $50,000,000 by order of President Wilson. Last month the capitalization was reduced $300,000,000, and the amount turned into the treasury. The $100,000,000, which is the present reduction, will be turned over to the government, and the remaining $50,000,000, with some $30,000,000 profits, will be turned back to the treasury when the work of the corporation is ended.—Elmer E. Reynolds.

HARRISBURG LETTER

Judging from the reports coming here from various agricultural exhibitions and county fairs efforts of the State Agricultural authorities to develop the farm products side of such gatherings as distinguished from the purely commercial and amusement end have been meeting with success and the firm stand taken recently with regard to payment of premiums and the classification of exhibits has been getting results. Secretary of Agriculture Fred Rasmussen has made a serious of speeches dealing with this feature of State supervision and has received numerous gratifying statements in support. In the last year or so, in reality since the war gave an impetus to agriculture and emphasized the great importance of Pennsylvania raising more of its own food supply, the interest in agricultural products has been growing and in numerous instances prize winners at county shows have been put into cold storage and brought here during the mid-winter show. The effect of the agricultural development at the exhibitions has been to reduce materially the art and similar exhibits and to cut down the commercial features.

After Vacation.—The state government will be getting back to its job in a week or so. A few officials have made records for absence which would qualify them to compete in this respect with the late administration and there is much to be done this fall in departments. The governor, who has been taking a cure, will be here soon and begin preparation of his address to his final legislature. The Sproul administration has done some remarkable things in the way of getting business efficiency into certain departments and has obtained results which will endure. The laws put upon the books are noteworthy. But the truth is it has been an extremely expensive administration and but for the checks of the auditor general would have run up travel and expense bills disconcerting to the average taxpayer. It has become fashionable on Capitol Hill to make the state pay as much of the freight as possible and not to be in Harrisburg any longer than necessary. The appearance of the deficiency bill in the opening days of the next legislative session is awaited with interest.

NEW JERSEY NEWS

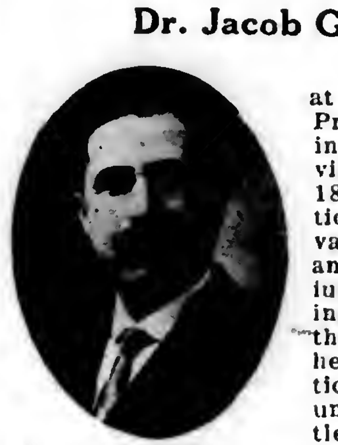
Products at Fair.—One of the new and interesting features of the 1920 exhibition of the Inter-State Fair Association here in September and October will be an extensive display of the agricultural products grown on the farms connected with the New Jersey state institutions. Announcement of a proposed conducting of a beef cattle show at the exhibition this year has attracted widespread attention. Among entries received for the show are forty head of prize stock from Kansas City, Mo., and thirty-five head from Belden, Mo. There will be a great display of poultry at the coming exhibition. When the comparatively new poultry building was erected, it was thought by Major Mahlon R. Margerum, secretary of the fair, that ample provision for the needs of the exhibition in this respect had been made for years of the future. Last year, however, the building was taxed to capacity, and the unprecedented demand of poultry raisers for space this year, has made necessary the acquiring of two large tents to take care of the overflow.

Crops Prosper.—New Jersey's crops are prospering. Corn is tasseling in the North and earing to the Southward, and early green corn is being marketed in abundance. Early buckwheat is blossoming and late sown is just coming in. Oats are ripening in the North and are about ready to cut, while cutting is in progress to the Southward. The third crop of alfalfa looks well as does the second crop of clover. Potatoes are producing well, and the late planted in Southern counties are coming up well.

Our Staff of Contributing Editors

Men who will Write Regularly upon their Special Subjects for Pennsylvania Farmer.

Dr. Jacob G. Lipman



Dr. Lipman was born at Friedrichstadt, Baltic Provinces (now included in the Republic of Latvia) on November 18th, 1874. His early education was obtained in private schools in Moscow and the Classical Gymnasium, Orenburg. Migrating with his parents to the United States in 1888, he continued his education in New York City until 1891, and then settled on a farm in Cape May County, New Jersey. He was engaged in farming, largely vegetable growing and fruit growing, until 1894. In the fall of that year he entered Rutgers College (State Agricultural College of New Jersey) and graduated from that institution with high honors in 1898. After graduation he was appointed Assistant Chemist of the New Jersey Agricultural Experiment Station, where he served until the fall of 1899. Resigning in order to continue his technical education, he registered as a graduate student at Cornell University, receiving there the appointment as Graduate Scholar and later Fellow in Chemistry. In 1901 he was recalled to New Jersey to establish at the New Jersey Experiment Station the Department of Soil Chemistry and Bacteriology, the first of its kind in the United States. He was made Instructor in Agricultural Chemistry in Rutgers College in 1902, and Assistant Professor in 1906 and Associate Professor in 1907. In 1910 he was given the title of Professor of Soil Fertility, and in 1913 that of Professor Agriculture. He was made Dean of Agriculture in 1915. The Disability and subsequent death of Dr. Edward B. Voorhees, Director of the New Jersey Experiment Station, led to the appointment of Dr. Lipman as Acting Director and later (1911) Director of the New Jersey Experiment Stations.

Dr. Lipman is Editor-in-Chief of Soil Science, an international technical journal devoted to soil fertility problems; Assistant Editor of the Journal of the American Society of Agronomy, and Associate Editor of the Journal of Agricultural Research. He is Chairman of the Fertilizer Committee of the National Research Council, Consulting Specialist of the Nitrate Division of the War Department, Secretary of the Section on Agriculture of the American Association for the Advancement of Science, Secretary-Treasurer of the Society for the Promotion of Agricultural Science and Fellow of the American Association for the Advancement of Science.

Among the scientific societies of which he is a member mention may be made of the American Public Health Association, the American Chemical Society, the Society for the Promotion of Agricultural Science, the American Society of Agronomy, the Society of American Bacteriologists, New Jersey Sanitary Association, New Brunswick Scientific Society, New Jersey Science Teachers Association, Washington Academy of Sciences, American Academy of Political and Social Science.

Dr. Lipman is author of "Bacteria in Relation to Country Life," the chapters on soils in Marshall's "Microbiology," and joint author of "A Laboratory Guide in Soil Bacteriology." He is also author of numerous technical and popular papers on soils, soil bacteriology, soil fertility and agronomy.

Dr. J. P. Stewart

Prof. Stewart was born on a farm in Illinois in 1876, where he lived and worked during vacations for twenty years. He graduated from high school and state normal school in Illinois, also from the University of Illinois and Cornell University, and received the degree of A. B. from Illinois in 1902, M. S. in Agriculture from Cornell in 1903, and Ph. D. from the latter in 1911.

Mr. Stewart taught two years in Township High School in Illinois, and three years in Illinois State Normal University. He was in charge of the Department of Experimental Pomology at the Pennsylvania State College for eleven years, 1907 to 1918, and has been engaged in commercial fruit growing and pomological advisory work since 1918.

He is a member of the American Society for Horticultural Science, and life member of American Pomological Society and of State Horticultural Association of Pennsylvania. Also a member and fellow of the American Association for Advancement of Science, a member of the Alpha Zeta and Gamma Alpha fraternities, and a member of the executive committee of the American Pomological Society.

In experimental work he has given especial attention to problems of orchard fertilization, cultural methods, and spraying, and has published bulletins, reports, and newspaper articles on these and related subjects. At present he is giving special attention to the business of growing various fruits on his own account.

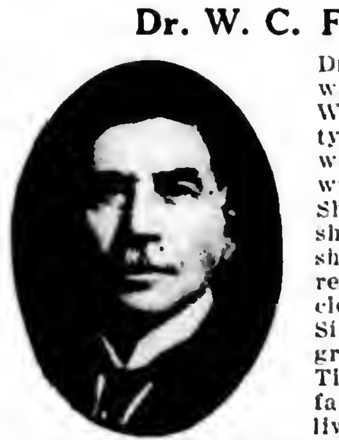
Prof. W. H. Tomhave

W. H. Tomhave was born at Fergus Falls, Minnesota in 1881. He was raised on a farm and attended common schools until 1899, at which time he entered the Minnesota School of Agriculture in St. Paul and graduated in 1902 and was manager of the Washburn Orphan Home farm until 1903, when he entered the University of Minnesota. He remained out of college during the fall term of 1904 to take charge of the meat demonstration work at the World's Fair at St. Louis.

Mr. Tomhave spent the summer vacation in working on the college farm and in doing experimental work in farm crops and livestock. He graduated from the University of Minnesota in the spring of 1907, and was appointed Assistant in Animal Husbandry at the Pennsylvania State College in the fall of 1907, where he remained one year, resigning in the spring of 1908 to accept the position as Livestock Expert for the Chinese Government, in which work he was engaged two years in Manchuria, China, in connection with the agricultural work of that country.

Prof. Tomhave returned to the United States in the summer of 1910 and become Live Stock Specialist for the Extension Division of the University of Minnesota. He was engaged in this work until 1912, when he came to The Pennsylvania State College as Professor of Animal Husbandry, which position is held at the present time. He has conducted a number of important lines of experimental work in connection with live stock development in the East, and has judged livestock at a number of the eastern state fairs, and is Superintendent of Cattle and Horses Departments of the Eastern States Exposition, Springfield, Massachusetts. Mr. Tomhave is a member of the American Society of Animal Production and a Fellow in the American Association for the Advancement of Science.

Dr. W. C. Fair, V. S.



Dr. William Cooper Fair was born on a farm near Woodstock, "Oxford County," Ontario. The farm was large, well stocked with Clydesdale horses, Shorthorn cattle, Berkshire hogs and Longwool sheep. Both parents were reared in Scotland, very close to the birthplace of Sir Douglas Haig, the great Scottish General. There were many nice farms and plenty of fine livestock in Oxford County, but those of Robert Fair ranked among the best. Here our Doctor Fair, as a boy, learned how to do all kinds of farm work, care for livestock, teach colts to work in harness and steers to work as oxen; besides, he learned to shoe horses.

At the age of 21 Dr. Fair had completed his common school and college training, graduating with honors from the Ontario Veterinary College of Toronto, Canada, Class 1871. He then located in Chatham, Ontario, 45 miles east of Detroit, Michigan. Soon built up an enormous practice, but at the end of four years sold his good will, leased his veterinary hospital to Dr. Livingston, his assistant. During the early part of 1876 Dr. Fair located in Cleveland, Ohio, where he has resided ever since. Besides maintaining a large veterinary hospital in Cleveland, for many years he operated his Mentor Stock farm at Mentor, Ohio, near Ex.-President Garfield's home. Dr. Fair and his assistants have always done a general practice, both in city and country. He has always enjoyed great patronage consequently had an overflow of business, and could select his customers. For many years he has been and is now president of the Society for the prevention of cruelty to animals. Is an ex-president of the Ohio State Veterinary Medical Association, a member of Academy of Medicine of Cleveland.

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Master Pipeless Furnace
has extra heavy castings. The fire pot is made in two pieces, heavily corrugated and guaranteed for years.

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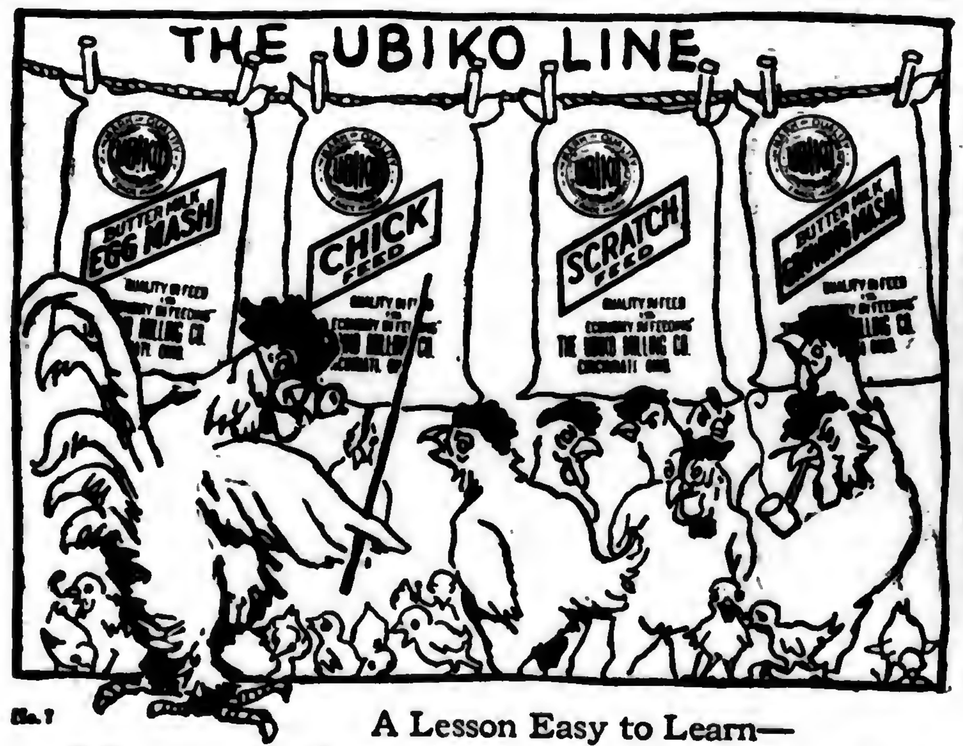

A Lesson Easy to Learn—
"Quality in Feed is Economy in Feeding"
Send for Egg Record Sheets and test Ubiko against the feed you are now using. The results will surprise you.
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UBIKO
BALANCED RATIONS
For All Farm Stock

POULTRY CLUB WORK FOR BOYS AND GIRLS

(Continued from Page 1.)

an idea of what constitutes proper poultry equipment and management.

Poultry Clubs and Exhibits

From the time poultry clubs were first organized a continuous effort has been made to encourage and develop exhibits among the boys and girls of the fowls actually raised on their respective plants. Such exhibits create friendly competition among the members as well as stimulate interest. In many instances these exhibits are held in connection with regularly established poultry shows or with state or country fairs or exclusive poultry exhibits. During the past year 712 such exhibits were held, and 1,614 birds were shown by 6,615 members. In addition, these members exhibited 2,767 dozen of eggs. There was distributed at these fairs in special and cash prizes over $10,000. The quality of the birds as shown in many instances by the club members at these exhibits has created very favorable comment. In some instances birds raised and exhibited by club members have been of such quality as to win in open competition with experienced poultry breeders. This is in itself an indication as to the progress that has been made in this direction.

Poultry House Erected on a Virginia School Grounds

Results

During the past year (1919) poultry clubs have been organized by U. S. Dept. of Agriculture poultry specialists in seven states; 1,186 such clubs have been established in 265 counties with an enrollment of 29,480 members. From the reports submitted by over 12,000 of these members it will be shown that they set 731,707 eggs from which 510,252 chicks were hatched, and 458,252 fowls were raised to maturity. During this period these members produced $493,719.36 in poultry and eggs. When it is considered that this amount of poultry products was produced by less than one-half the number of members enrolled, it is reasonable to assume that the total value of poultry products produced by all of the members amounted to considerably over a half million of dollars.

A Boy Club Member Who Erects His Own Houses

Individual Results

From the reports received from these club members it is interesting to note the results attained by various individuals. As an example an instance is cited in the case of Frances Easley, a Tennessee farm girl, who became a member of the boys and girls poultry club about two years ago. The first season she was very successful in hatching and rearing her chicks, and in addition to these which were sold she had a nice flock to carry her over and from which she used as a breeding pen the following year. At the end of that time the following report was submitted.

Value of market poultry sold,	$13.86
27 pullets sold as breeders ...	47.50
17 setting of hatching eggs sold	22.05
On hand November 1st	
12 cockerels, valued at	$24.00
112 pullets and cockerels valued at	100.00
Won at County Fair	3.00
	$210.41

Russell Monroe, a country boy of 14 years of age, raised 120 Golden and Silver Campines from 175 eggs. At the State Fair he made six entries and won special for the best display, in addition to other prizes. In this exhibit he competed against three older breeders. Furthermore he received the state championship loving cup and a free trip to the state fair for his excellent work as a club member.

Orbid Miller, an Oklahoma boy, raised 285 chicks. At the end of his first club year he made a profit of $336 over the cost of production through the sale of chickens and eggs sold for commercial as well as breeding purposes.

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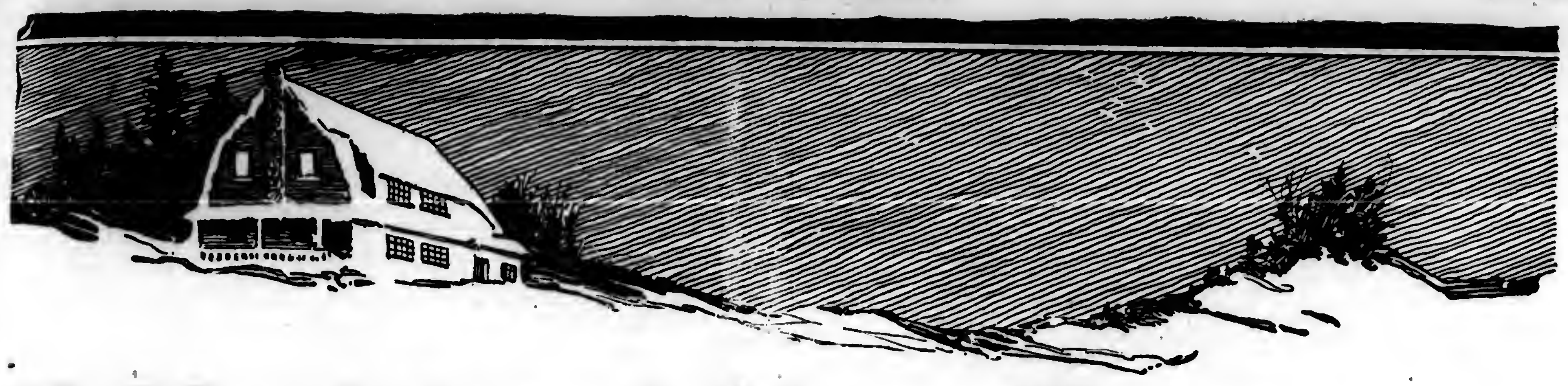

Cold winter nights--will your house be warm and cosy?

WHEN the quick dusk creeps down over the hills in late afternoon and lights shine early, the peppy, frosty air of fall gives a warning of winter. You bet a man is glad then that his Andes is camped in the cellar and all ready for a battle with the frosts. He's glad for himself. And he's glad for his wife and his kiddies. An Andes is a sure guarantee of summer comfort in winter.

If you haven't got your Andes yet, why, man alive, you'd better be stirring. Cold weather waits for nobody. But does it take an Andes long to lick the stuffin' out of cold weather? We'll say it doesn't. We'll guarantee it doesn't to the extent that if any Andes doesn't give complete satisfaction, it will be taken out and the full purchase price returned. Can't remember that that ever happened, either.

All winter long your home can be flooded with warm, healthful, economical heat. The Andes System One Pipe Furnace saves fuel whenever it is used, and it is not unusual for it to save from one-third to one-half the amount formerly used. The Andes can be installed in one day without the confusion and dirt of putting in pipes in walls and floors.

The Andes is a very economical furnace to buy because of the very low cost of installing it; because it is made of quality materials by expert workmen which insures long life.

Write for free book which tells all about this wonderful furnace. Use the coupon today. No matter how warm it is noontimes, it's beginning to get cold nights. Don't delay.

One of 50 houses in which F. E. & F. W. Wells, of Greenfield, Mass., installed Andes One Pipes. They write, "The houses have kept very warm, even at 20 and 30 degrees below zero, besides using very little coal."

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Manufacturers also of the famous Andes Stoves and Ranges

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"Better Heating for Less Money"

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BETTER HEATING for LESS MONEY
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I am interested in saving fuel money. Please send me your free, illustrated booklet called, "Better Heating for Less Money."

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9

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Do not overlook Louden Labor-Saving Barn Equipment. It does away with the biggest part of the barn work and makes what is left of it easier—enables a boy to do a man's work, or one man to perform the work of two or three men. Get our 224-page catalog. Sent post-paid, no charge; tells all about stalls and stanchions, litter and feed carriers, animal pens, water bowls, barn and garage door hangers, hay unloading tools, power hoists, cupolas, ventilators—"Everything for the Barn."

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Please send, postpaid, without charge or obligation, the books checked below:
——Louden Barn Plans
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I expect to build (remodel) a barn about (date)..........for..........cows..........horses.
Am interested in:..........Stalls..........Stanchions..........Carriers..........Water Bowls..........
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Name..........
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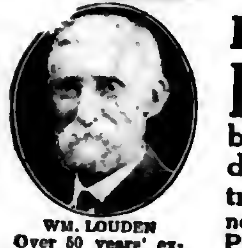

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Plowing, Disking, Pulverizing and Harrowing, Miscellaneous Belt Work, Shelling, Shredding, Feed Grinding, Hauling, Threshing, Binding Baling, Planting and Seeding, Stump Pulling, Sawing Wood, Ensilage Cutting and Silo Filling

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The Frick Tractor is a Dependable source for Farm Power. It is not an experiment. It is made and sold by manufacturers of Quality Farm Power Machinery. Ask any Frick user.

SAVES LABOR AND TIME
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Write for Catalog, price and further information.
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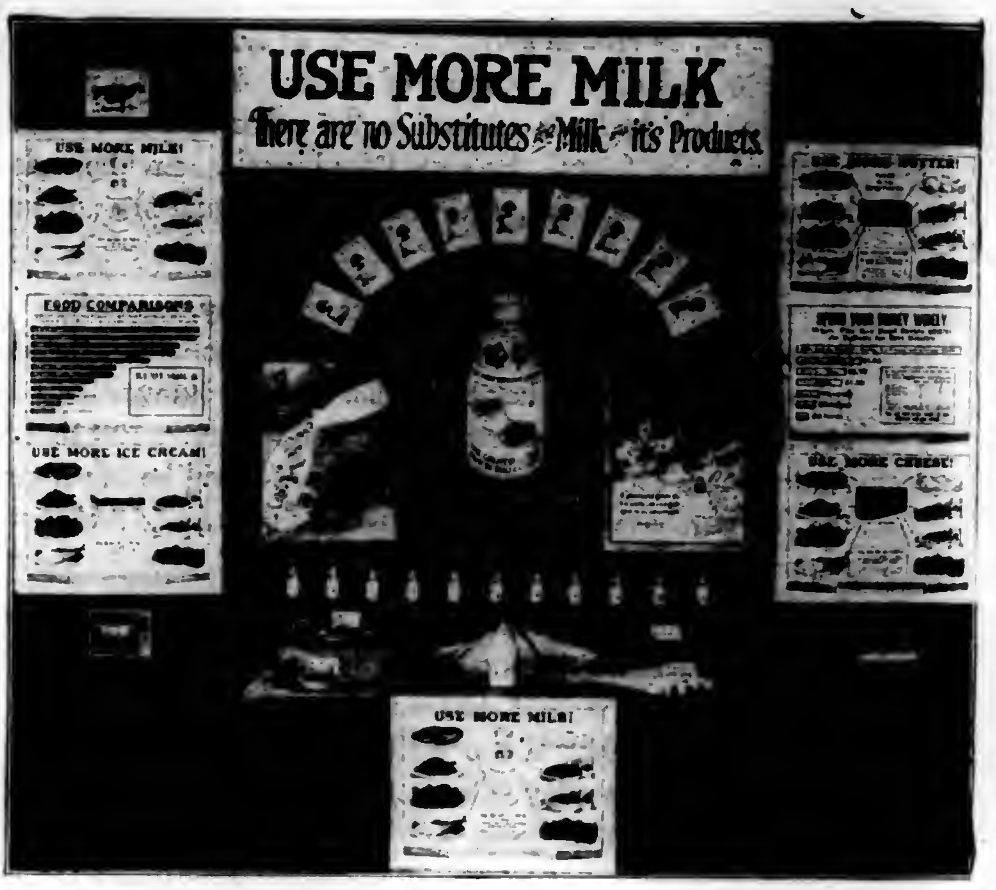
DAIRY EXHIBITS AT COUNTY FAIRS

The greatest need of the dairy industry is consistent advertising and publicity. As a result two customers will be created where there is now but one, and each will be made to feel that dairy products are indispensable foods—nourishing, healthful and economical. This will mean Better Health, Increased Efficiency, and a Saving of Money on the part of the consumer, and Increased Profits for those engaged in this industry.

There are many ways of advertising, one of which is by exhibiting at local, county, state and national fairs.



This exhibit can be secured by writing your State Dairy Council or the National Dairy Council, 910 So. Michigan Ave., Chicago, and remitting $2.00 to partially cover cost of preparation. This exhibits requires a space approximately 10 feet wide. The Council furnishes everything shown above, except foods shown on table.

Every man engaged in the dairy industry should see to it that the products of this vital industry are advertised and are continually before the public. The public should be continually reminded of the importance and economy of dairy products. Every opportunity should be used by dairymen and representatives of dairymen to call the public's attention to these fundamental foods.

The accompanying picture illustrates a suggestive dairy booth for fairs which can be quickly and conveniently prepared. The National Dairy Council, 910 So. Michigan Ave., Chicago, is prepared to supply the material for the booth shown herewith to any persons desiring the same.

The County Agents will find this material ideal for their use. The exhibit is unusually attractive. All the posters, except two, are in colors. The National Dairy Council supplies everything except the foods shown on the table.

NEW JERSEY TO HAVE PAID SECRETARY

Saturday, August 21st, was a banner day for New Jersey Holstein Breeders. For about a year things have been livening up among the New Jersey Holstein men. Somerset County started things going August 1919, when they laid plans for an organization made up of the breeders of Hunterdon and Somerset Counties. Then Salem and Cumberland organized the Salem-Cumberland Association, followed by Warren County. Mercer County came next, then Morris County organized her local club in the spring of 1920. Three of the clubs have held sales with very good success. Now, New Jersey is to put on a state-wide campaign for a paid secretary, on September 13 to 23. President Aitken and R. V. Pollock are going to spend ten days in the state to help put it across.

New Jersey had the first 40-pound cow. Some of the best breeding in the country has been done in this little state. Altho she has but 120,000 Holsteins, she stands 12th in the list among the states of the union. She has the Allamuchy and Tranquillity farms, the home of the King of the Ormsbys and King of the Sadie Vales. She has Pequest farms, the home of the $100,000 bull, King Pontiac Hengerveld Fayne. Bloomingdale farms, owned by the late A. A. Cortelyou, is the home of King Model. Mr. Cortelyou has given some of the best cattle of the breed to the Holstein world, and Bernard F. Myer developed Valdesa Scott (2). Forsgate Farms now have a hundred pure bred females and eight cows on semi-official test. And one of the last but not the least, Rancocas Stock Farm at Jobstown, New Jersey. Here some of the best cows of the country are being brought together.

At the meeting on Saturday at New Brunswick, about fifty enthusiastic breeders were present. Mr. G. D. Brill of Forsgate Farm and President of the State Association introduced Dr. J. G. Lipman, Director of the Agricultural Experiment Station and Dean of the Agricultural College

Dr. Lipman urged upon those present the strengthening of their association. He was followed by John Ridgeway of the Salem County Holstein-Freisian Association who told of the work of Mr. Bullard, the Secretary of their local Holstein-Friesian Club. He said that outside of one other local club in the West, the Salem-Cumberland club was the only one to have a paid secretary. He made the statement also that Mr. Bullard, altho he had only been on the job two months, had made his salary both months. He said that the men in that section were so interested in the Black and Whites that they had gone down in their pockets and put up enough money to assure the success of a paid secretary for the first year.

The next man on the program was Mr. R. V. Pollock of the Holstein-Friesian Association of America. After Mr. Pollock had talked to the dairymen for a few minutes he called for a vote as to how many thought a paid secretary for the state organization would be worth while. Every man voted in the affirmative. When Mr. Brill called for a vote on whether New Jersey should put on a campaign or not, the vote was again unanimous that a campaign be started. New Jersey will be the fifth state in the Union to have a paid secretary. Altho this little state is known as the Garden State, she produces annually about thirty million dollars worth of dairy products. These products are practically one-fifth of the total valuation of agricultural products of the state.—John W. Bartlett.

A Good Milking Machine is a Labor and Time Saver

DETROIT CHILDREN DRINK MORE MILK

Dairy specialists sent out by the United States Department of Agriculture to stimulate, thru educational work with women, the consmumption of milk and milk products for human food, report large increases in the use of dairy products in those states where milk campaigns have been put on.

In Detroit the president of the Distributors' Association reported an increase in that city of 10 percent in the sale of whole milk, 15 percent in butter, and 3 percent in cottage cheese, directly attributable to a milk campaign. One Detroit distributing firm has since sold weekly 20,000 more pounds of butter and 50,000 more quarts of milk than it did before the educational work on the value of dairy products was given to the people.

During the campaign 371 lectures were given in schools, factories, and before women's clubs and mother's meetings. These meetings were attended by 70,000 persons.

SUCCESSFUL FARM MEETINGS

Farmers' picnics and summer meetings are a bigger success than ever this year. They are usually held by the three largest organizations, the Grange, the Farm Bureau and the League, cooperating, and in some counties at least, they seem to be taking the place of, and having a larger attendance than the county fair. It is certainly surprising to see the great crowds of farm people that get together to talk over their problems and have a good time.

One of the reasons why these picnics are a success is that they are well organized. Farm Bureaus are rendering a good service by giving the farmers' meetings publicity, by printing programs, by working with the other leaders to secure speakers and arranging for music, and in general, to see that every one who comes goes away with a feeling that he will come again another year.

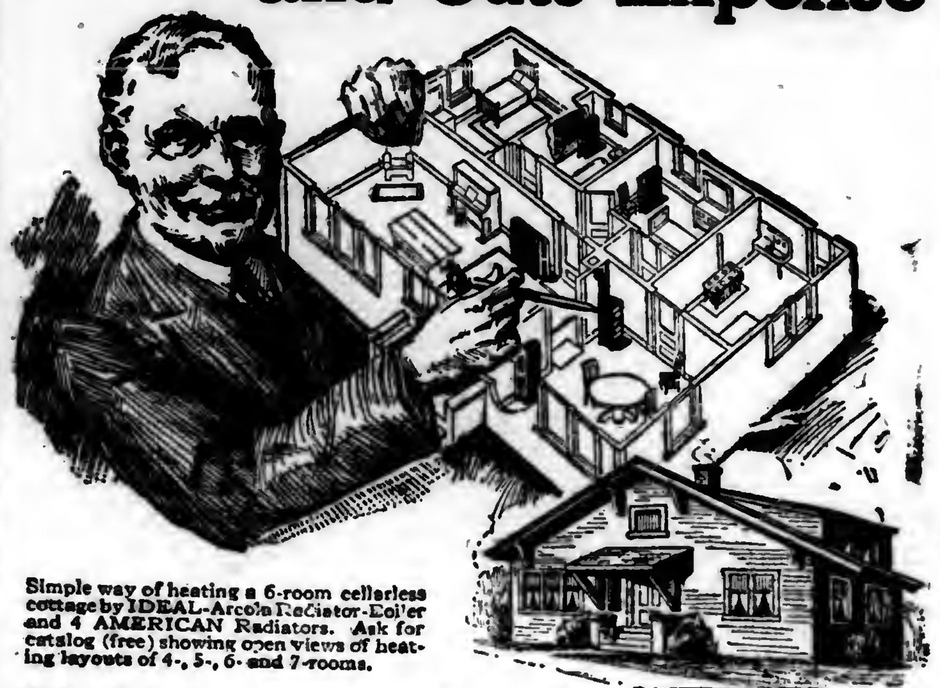
So many of them are being held that the News has not space enough to describe the splendid programs which are being given at each of them.—Dairymen's League News.

The number of colts in Pennsylvania this spring compared with the usual number is approximately 77 percent. The automobile, motor trucks and tractor appear to be supplanting horse-power on the farms. However, the price and demand for good draft horses are attractive, but the driving horse is rapidly disappearing from the roads.

The number of laying hens in Pennsylvania appears to be 97 percent of the usual number. This is an improvement of one percent over last year and eight per cent better than two years ago. The number of spring chicks hatched are estimated at 96 percent compared with the usual number. This is two percent below last year but seven percent better than two years ago. Considerable complaint of poor hatches this spring.

Maybe neither the milk nor the milkman is to blame for the sour milk. Perhaps you left the bottle standing in the sun, instead of putting it in the ice box immediately.

The farmer who shows an interest in his boy's junior project will have less trouble keeping boys on farm.



This Heat Beats Winter and Cuts Expense

Simple way of heating a 6-room cellarless cottage by IDEAL-Arcola Radiator-Boiler and 4 AMERICAN Radiators. Ask for catalog (free) showing open views of heating layouts of 4-, 5-, 6- and 7-rooms.

Modernize the old home and enjoy life in comfort. This small house heating outfit is built on the same principle as the big plants for residences. The IDEAL-Arcola is inexpensive, safe, easy to run, clean, economical with fuel and will last and heat your home for generations. It will heat all rooms evenly no matter how hard the blizzard blows—never wears out or needs repairs.

IDEAL-Arcola Radiator-Boiler Farm Home Heating Outfits

Any dealer will furnish in sizes to suit rooms and climatic conditions.

For Soft Coal	No. 1-B Size IDEAL-Arcola with	100 sq. ft. of Radiation	$142
	" 2-B " " " "	150 " "	176
	" 3-B " " " "	200 " "	213
	" 4-B " " " "	250 " "	251
	" 5-B " " " "	300 " "	290
For Hard Coal	No. 1-A Size IDEAL-Arcola with	135 sq. ft. of Radiation	$163
	" 2-A " " " "	200 " "	206
	" 3-A " " " "	265 " "	251
	" 4-A " " " "	330 " "	299
	" 5-A " " " "	400 " "	349

Prices include Expansion Tank and Drain Valve. Prices do not include labor, pipe and fittings used in installation and which are supplied by the local dealer at extra charge. Radiation is of regular 38-in. height 3-column AMERICAN Peerless, in sizes as needed to suit your rooms. Outfits shipped complete f. o. b. our nearest warehouse, at Boston, Providence, Worcester, Springfield (Mass.), Albany, New York, Philadelphia, Harrisburg, Pittsburgh, Baltimore, Washington, Richmond, Buffalo, Cincinnati, Indianapolis, Birmingham, Detroit, Chicago, Milwaukee, Minneapolis, St. Paul, Des Moines, or St. Louis.

Shipped complete for immediate installation

The beauty of the IDEAL-Arcola method is that no cellar is needed. Everything is on one floor. The Arcola is placed in any room that has a chimney connection. No running to cellar. Same water is used over and over again for years. No fire risk.

Buy now at present attractive prices for outfits complete!

IDEAL-Arcola outfits consist of the boiler and radiators to heat various size houses. Write us your requirements! Unlike stoves, there are no coal-gas leaks into the living-rooms. The IDEAL-Arcola delivers the soft, radiant warmth of hot water—not the dry burnt-out atmosphere of stove heating. There is no fire risk to building—no danger to children—fire lasts for hours! The Arcola burns hard or soft coal.

The outfit consists of an IDEAL-Arcola Radiator-Boiler and 4, 5, or 6 AMERICAN Raditors and Special Expansion Tank—everything except labor, pipe and fittings, which any local dealer will supply. See prices below for various sizes of outfits.

Catalog showing open views of houses, with the IDEAL-Arcola Boiler in position will be mailed (free). Write today

Sold by all dealers. No exclusive agents.
AMERICAN RADIATOR COMPANY
Write to Department F-30 Chicago

One oiling a year provides ample lubrication for Model 12 STAR WINDMILLS®

No-Oil-Em Bearings save many trips up the tower, insure positive lubrication, and prevent extravagant use of oil. Ask the Star Windmill dealer in your community to show you one of the No-Oil-Em Bearings.

Catalogue No. 95 sent on request.

FLINT & WALLING MFG. CO.
Department F Kendallville, Indiana

HOOSIER Water Service
Provides an independent supply of water for farm homes. Easy to install — simple and economical to maintain. Write for Bulletin F.

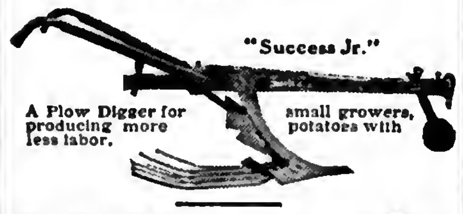
We have long studied the economical harvesting of potatoes, and now offer a Farquhar Digger suitable for every condition of soil.

The No. 1 Elevator Digger shown above is a general favorite, built to stand the strain of hard continuous usage. Rigid tongue construction, and the choice of Cross Bottom or Angle Bucket type of Elevator. It digs clean, and leaves the potatoes convenient for picking. Large Nos. 2 and 3 Elevator Diggers for deep digging and bad conditions. Engine drive, if desired.

Our Success Jr. Plow Digger gets more potatoes in one trip over the row than a turn plow in three. Price so low it is within reach of the half acre grower. For those who prefer a more elaborate Walking Digger, we have the renowned Gilt Edge.

If you grow potatoes for the market, you can't afford to be without a Digger. Illustrated Catalogue explaining why that Digger should be a Farquhar mailed free on request. Write for copy today.

A. B. FARQUHAR CO., Ltd.
Box 246, York, Pa.


"Success Jr."
A Plow Digger for small growers, producing more potatoes with less labor.

Other Farquhar products are Engines and Boilers, Steam and Gas Tractors, Sawmills, Threshers, Grain Drills, Hydraulic Cider Presses. Ask for literature.

Get Better Shoes and Save Dollars

Send no Money

$3.98

A Real Bed-rock Bargain

At last you can get an honest shoe bargain that is based on conscientious manufacturing methods. Only the closest buying of materials and manufacturing in big lots make this low price possible. This shoe is for all seasons. A shoe that will stand up and keep its shape, no matter how rough it is treated, and will always remain comfortable. Made of the toughest soft leather with solid, heavy, honest soles and heels, guaranteed good all the way through. If they are not the greatest shoe bargain that you ever stepped into, return them at not a cent's cost to you.

SEND NO MONEY. Just your name and address and size wanted. Pay $3.98 when the shoes arrive. If they are not the very best bargain you can find, send them back and they won't cost you a cent. That's fair, isn't it? Fill in the coupon right now and you've saved $2, and gotten as good shoes as you ever put on your feet.

Stewart the Bargain Shoe Man
Binghamton, N. Y.
Send me ...... pairs bargain shoes price $3.98 on approval. If not satisfied, I will return the shoes. My size is ....
Name ....
Address ....
P. F. No. 5

ARMLEDER & HOFFMAN
Trucks
for all purposes
Built of high grade standard units that have stood the test
Carrying capacity 1 to 5 ton loads
Direct Factory Distributors
Sales and Service
FIDELTY MOTORS, Inc.
4830-32-34 Market Street, Phila.
DEALERS WANTED

CORN HARVESTER One man, one horse, one row. Self Gathering. Equal to a Corn Binder. Sold direct to Farmers for 22 yrs. Only $28 with fodder binder. Free Catalog showing pictures of Harvester. PROCESS CORN HARVESTER CO., Salina, Kans.

HAY Ship to The Old Reliable House DANIEL McCAFFREY'S SONS 623-25 Wabash Bdg., Pittsburgh, Pa.

LANCASTER COUNTY FARM BUREAU ON PAID MEMBERSHIP BASIS

The Lancaster County, Pa., Farm Bureau is in the midst of a campaign that may have a marked influence on the future of the Farm Bureau work in Pennsylvania — it has struck out to put the Bureau on a paid membership basis. Hitherto the Bureau has been operated by the assistance of the state and the Lancaster County Commissioners, and this co-operation is intended to be maintained, and perhaps increased, while at the same time the bureau will receive the membership dues, enabling it to enlarge the scope of its work and render still greater service to the farmers.

Heading the reorganized bureau is J. C. Brubaker, of Lititz, R. I. The other officers and members of the Executive Committee are M. G. Brubaker, Lancaster R. 3; Assistant Secretary, D. M. Landis, Lancaster R. 7, Treasurer, A. E. Lane, Clay; W. W. Gibble, Brunnerville; J. Aldus Herr, Lampeter; H. H. Snavely, Willow Street; John G. Reist, Mt. Joy, and Harrison S. Nolt, Columbia, R. 1.

Principal among the aims of the Greater Farm Bureau are the employment of an assistant County Agent to Agent Bucher, who will have charge of a thoro cost-of-production campaign embracing the major crops. The assistant agent will also assist in covering the Garden Spot in response to the calls for assistance or information.

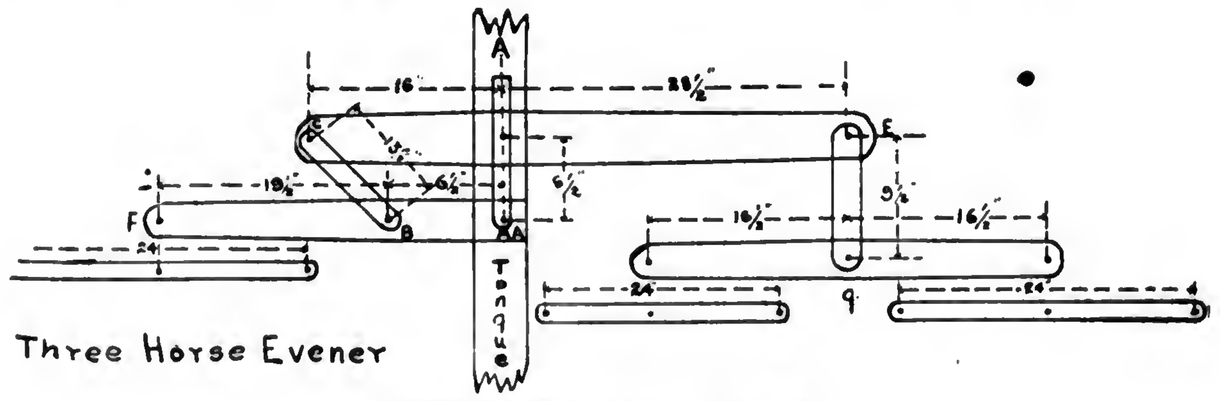
Coincident with the launching of the campaign the bureau has published the introductory number of its own "house organ," the "Garden Spot News," which will from month to month detail the activities of the Farm Bureau, be a constant medium for the dissemination of the County Agent's advice on current problems, and at all times keep the farmer abreast with the investigational work of State College and its local representatives. Together with this magazine, a publicity office in charge of T. Warren Metzger, a former newspaperman of Lancaster, has been opened and sends out a weekly farm letter to every city and county paper in the Garden Spot. Mr. Metzger is also editor of the new Farm Bureau magazine.

DIRECTIONS FOR MAKING A THREE HORSE EVENER

A to AA strap iron 6½ inches long; goes from wagon hammer to bolt in the tongue. bolt goes thru the strap iron, short double tree and tongue. Bolt 6½ inches long. B to C two strap-irons 13½ inches long, with 3 inch bolt in each end. One strap iron on each side of the wood. G to E two strap-irons 9½ inches long, with 3 inch bolts in each end. One strap iron on each side of the wood. Distance from AA to B 6½ inches, from C to centre of tongue 16 inches: from centre of tongue to E 28½ inches from B to F 19½ inches.

These measurements go from centre of material where the holes are made thru the wood and irons from centre of one hole to centre of the next one, and ends should be allowed from the centre of the holes. Of course the "bolts" must be in accordance with the "thickness" of the material the evener is made.

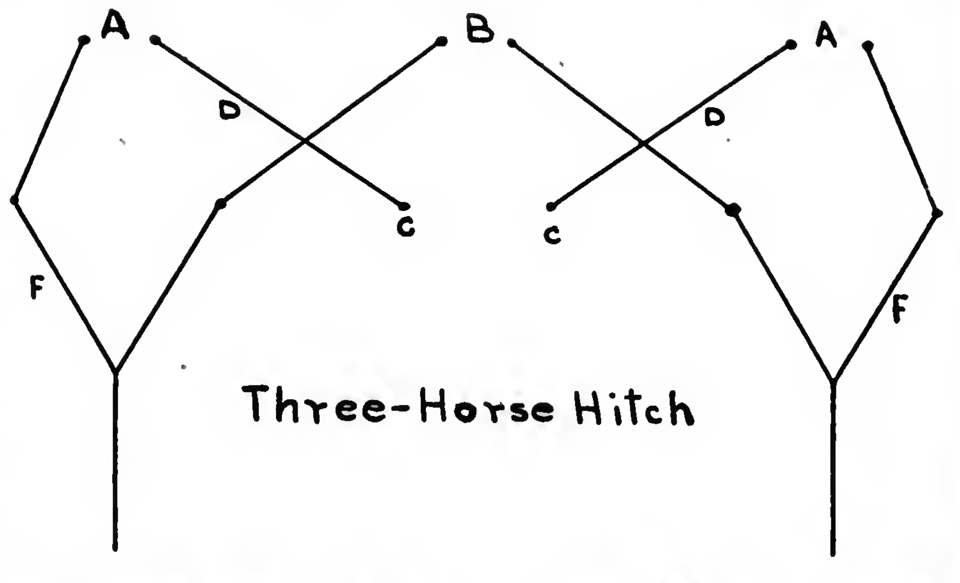
We have used several for many years, and it is the "best" three horse evener we ever used, and so say many of my neighbors for whom I have drafted the pattern for making them. One needs three horses so much on a farm—i. e.—when plowing with sulky plow or using sulky harrow; drawing loads; hauling produce to market, etc. And "this" seems to "fill the bill" perfectly, and is very easy on the horses. —M. I. C. A.



Three Horse Evener For Tongue

THREE HORSE HITCH

Here is a way to drive three horses abreast. AA represent bridle bits of outside horses. B is the bit of the middle horse.



Put check lines FF on outside horses, letting the inside checks of each run to middle horses bridle.

Put hitching reins D-D from hame-rings of middle horse CC to inside bit rings of the outside horse. The one who gave me this, said he had used it and it was right, and others who were horsemen, said altho they had not tried this way they knew it would work perfectly for it seemed so reasonable. It surely would not take much brains to use it.—M. I. C. A.

COMING EVENTS

New York State Fair, Syracuse, September 13-18.

Agricultural Society of Queens-Nassau Counties, annual fair, Mineola, N. Y., September 21-25.

Eastern States Exposition, Springfield, Mass., September 19-25.

Delaware State Fair, Wilmington, Del., Sept. 6-10.

Trenton Inter-State Fair, Trenton, N. J., September 27-Oct. 1.

Local Fairs—Pennsylvania

Stroudsburg, Monroe Co., Sept. 6-10.

Byberry, Philadelphia Co., Sept. 6-11.

Montrose, Susquehanna Co., Sept. 7-9.

Troy, Bradford Co., Sept. 7-10.

Indiana, Indiana Co., Sept. 7-10.

Port Royal, Juniata Co., Sept. 7-10.

Westfield Twp., Tioga, Sept. 7-10.

Clarks Summit, Lackawanna Co., Sept. 7-11.

Athens, Bradford Co., Sept. 13-18.

Harford, Susquehanna Co., Sept. 14-16.

Carrolltown, Cambria Co., Sept. 14-17.

Brookville, Jefferson Co., Sept. 14-17.

Newport, Perry Co., Sept. 14-17.

Tunkhannock, Wyoming Co., Sept. 14-17.

Reading, Berks Co., Sept. 14-18.

Nazareth, Northampton Co., Sept. 14-18.

New York Fairs

Delhi, Delaware Co., Sept. 6-9.

Brookfield, Madison Co., Sept. 6-9.

Fonda, Montgomery Co., Sept. 6-9

Boonville, Oneida Co., Sept. 6-10.

Rhinebeck, Dutchess Co., Sept. 7-10.

Cooperstown, Otsego Co., Sept. 7-10.

Troupsburg, Steuben Co., Sept. 7-10.

Owego, Tioga Co., Sept. 7-10.

Chatham, Columbia Co., Sept. 8-11.

Watkins, Schuyler Co., Sept. 14-16.

Afton, Chenango C., Sept. 14-17.

Riverhead, Suffolk Co., Sept. 14-17.

New Jersey Fairs

Mt. Holly, Burlington Co., Sept. 14-17.

Drying fruits and vegetables saves cans and sugar. Have you a good bulletin on the subject? The State College at Ithaca, N. Y., will send you one if you ask for F 132.

Chocolate cake made with sour milk and soda is usually softer and darker in color than that made with sweet milk and baking powder. Cocoa should be substituted for chocolate by weight instead of by measure.

Creaking doors and squeaking bureau drawers become mute if rubbed with hard soap.

Hoffman's Seed Wheat

HERE is a chance for the readers of the Pennsylvania Farmer to buy Seed Wheat of extraordinary quality at low cost. Six hardy, reliable kinds of winter wheat are offered. They were grown especially for seed purposes on the fertile wheat soils of Lancaster County, Penna. Harvested in good, dry condition—sound in germination. Now cleaned — graded — sacked — ready for shipment the day orders are received.

Splendid Results from Hoffman's Leap's Prolific Seed

This Seed does not contain cockle—rye—smut—cheat—garlic—disease or foul seeds. Is closely graded and thoroughly cleaned by the most modern and up-to-date methods known today.

If you buy one of the Hoffman Wheats and get only ½ to 1 bushel more wheat per acre from it next harvest, your investment more than pays for itself. Chances are you will get 5 bushels more per acre — many customers have reported 10-bushel increases.

Money-Back Guarantee
"On arrival of seed, examine it—and if you don't find it clean, sound, graded and satisfactory, return it to us—we will refund your money and pay round-trip freight." Hoffman's Seed Wheat will please you!

Every variety offered has proven to be a reliable yielder — you take no risk in trying any of them — all have been used successfully by readers of the Pennsylvania Farmer for several years. You must be pleased with the Seed you buy, or you needn't use it—read the Money-Back Guarantee.

Varieties

"Leap's Prolific" (Smooth Chaff)

The most popular variety we have ever offered. Never has one single wheat brought forth so many reports as have come from users of "Leap's Prolific."

A Heavy Yielder—both of grain and straw. Reports of yields greatly above the average, have come to us from growers. One enthusiastic farmer of northern Pennsylvania last year reported a 50-bu. per acre yield from his "Leap's Prolific" seed. Reports of 40-bushel yields have been numerous. One 22-acre seeding produced 898 bushels—nearly 41 bu. per acre.

Only light seeding required. Sow 1½ bu. per acre—you needn't sow more. This "Leap's Prolific" wheat, grown here on these favored wheat soils—put through our thorough cleaning plants—will stool out strongly—root deeply—and produce a good bunch of stalks from each grain.

Leap's Prolific for all soils. It has been given fair trial for several seasons on highland, lowland, limestone, gravel, slate and clay soils, and has come out well on all of them.

Stiff-strawed—Does not shatter. Leap's Prolific grows a tall straw—very stiff. Does not lodge easily. The grains of Leap's Prolific are well enclosed in their chaff—this prevents easy shelling out when handling this wheat. Chaff is white and beardless. Grain is long, hard, dark red in color, of very desirable milling qualities.

Leap's Prolific is free from faults often chargeable to other varieties—some of these, lateness, soft straw, short straw, small or soft grains, tendency to shatter. Indeed, none of these defects are habits with "Leap's Prolific."

There is Business and Pleasure back of Leap's Prolific. We recommend this variety to the business farmer who wants to grow wheat he will be pleased to show to his friends—wheat his friends will have pleasure in seeing—wheat that will show a profit. There is profit in "Leap's Prolific."

PRICE:—$3.95 per bu. (Bags are FREE—Freight will be paid per offer at bottom of page.)

Head of Leap's Prolific

Lancaster Fulcaster (bearded)

The best known bearded wheat. A reliable yielder year after year. A strain of the old Fulcaster improved by selection here in the famous Lancaster County soils. Here it has improved in vigor, hardiness and productiveness. Berry is large, red, hard, plump, much desired by millers. Grain weighs 61 to 63 lbs. per measured bushel. Lancaster Fulcaster is extremely hardy—a great straw variety, as well as a good producer of grain. We know of no other wheat better adapted for thin soils or soils of just average fertility.

In the Penn'a. State College Experiment Station 4-year test of 17 varieties, Fulcaster led all the bearded varieties, yielding 33.8 bu. per acre for the 4 years.

Lancaster Fulcaster is a dependable wheat—and any farmer liking a bearded wheat will be pleased with this variety. Sow 1¾ bu. per acre. **PRICE:**—$3.60 per bu. Bags free. Freight paid per offer below.

Harvest King (beardless)

This variety has been with us since 1899—our first year in the seed wheat business. No better evidence can be given of its being a reliable and dependable variety. Its yields of today continue to rank among the highest. It continues to grow a good, tall, stiff straw—with large well-filled heads—does not shell out easily—is a splendid stooler, and notably a hardy type. The chaff of Harvest King is beardless, color red to brown. Ripens early . . . . Mr. A. Cooper, local grower, threshed 1100 bu. from 27 acres—averaging over 40 bu. per acre. In a Penn'a. State College test of 36 varieties, Harvest King led all the other varieties grown by its side, with a yield of 34.8 bu. per acre . . . . Sow 1¾ bu. per acre. **PRICE:**—$3.60 bu. Bags free. Freight Offer below applies.

Stoner's Miracle (bearded)

Chaff white, grain large, plump, dark red, hard, straw stiff and long. Ripens early. Sow 1¼ bu. per acre. Stoner's Miracle is a wonderful stooler, and need not be seeded heavily. This variety will not give you 60 bu. per acre, as some unfair folks have claimed for it, but it has well established records of 40 bu. per acre on large fields. You will grow an abundance of straw and a satisfactory amount of grain with Stoner's Miracle seed—and as pretty a berry as you have ever raised. **PRICE:**—$3.65 per bu. Bags free. See Freight Paid Offer.

Golden Wave (bearded)

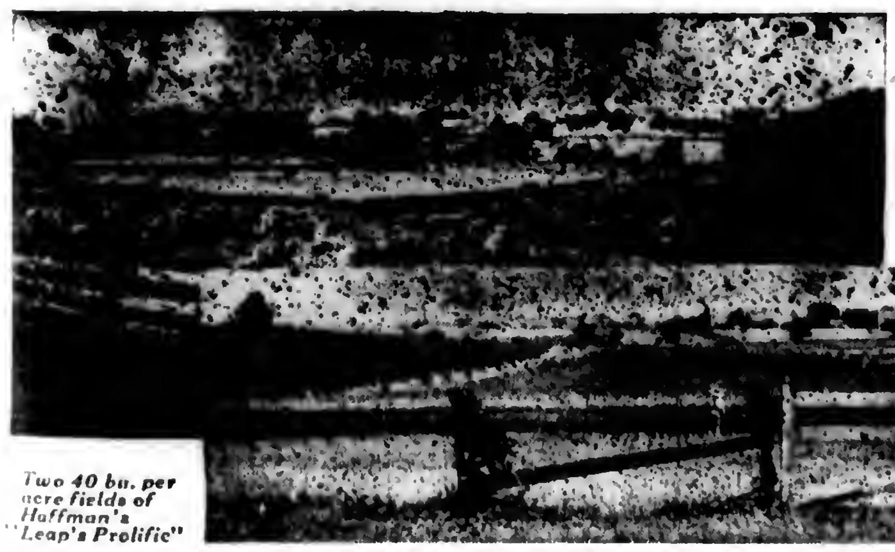
One of the leading bearded sorts—especially noted for its unusually stiff straw. Some folks have more confidence in a bearded wheat, yet dislike some kinds because of weak straw. Such folks need have no fear of Golden Wave on this account—we never saw another bearded wheat that stands up with Golden Wave. This is one of our banner yielders. Mr. S. Mumma, local grower, has averaged 35 bu. per acre for the past 5 years. Grain of Golden Wave is of good size, and hard. Straw grows long—very stiff. Chaff is brown. Ripens early. Sow 1¾ bu. per acre. **PRICE:**—$3.60 per bu. Bags free. Freight paid per offer.

Four Rowed Fultz (beardless)

Here is one of the standard sorts—has been with us for past twelve years, and has gained a permanent place on farms of many of the country's leading wheat-growers. Is not surpassed by any variety for earliness and stiffness of straw. Yields heavily year after year. Is extremely hardy. Heads are white—very compactly built. If your land is so rich that all wheats lodge badly, Four Rowed Fultz would be a good selection for you. It will not only stand up well, but will make a good yield of both grain and straw . . . . Sow 1½ to 1¾ bu. per acre. **PRICE:**—$3.65 bu. Bags free. Freight paid per offer below.

REMEMBER This seed we offer you is grown in the finest wheat producing section of the country.
Is sold direct to you from the section where it is produced.
The most hardy and prolific varieties known. Clean—sound—hardy—graded seed.
Sold on terms that must be satisfactory to you. Quoted at prices that include bags and freight.

Above prices apply to quantities up to 24 bushels. On lots of 25 to 74 bushels deduct 5c per bushel. On lots of 75 bushels and over deduct 10c per bushel.



Two 40 bu. per acre fields of Hoffman's "Leap's Prolific"

Freight Paid Offer On orders for 5 bushels or over, we pay all freight to any railroad station in Penn'a., Ohio, New York, New Jersey, Virginia, West Virginia, Maryland, Delaware, Connecticut and Massachusetts. In all other states (on orders of 5 bushels or over) we allow you to deduct from your remittance 18c per bushel from the price of seed to help pay freight charges. Bags are free. Terms — Cash with order.

A. H. Hoffman, Inc.
Box 40, Landisville
Lancaster County Pennsylvania

A WELL-PLANNED KITCHEN

That Lightens Housework

The kitchen is the woman's workshop. Every woman does more efficient work if the surroundings are pleasing and the tools the best, therefore every homemaker should plan her kitchen so that it will meet her needs. It should likewise have just as many labor-saving devices as possible.

A VERY CONVENIENT KITCHEN
This view shows the stove (gas) and built-in work cabinet on the left, and a convenient array of cupboards and drawers on right.

These pictures show a kitchen 9 by 12 feet in the clear. On the north are three windows which give an even light to the working surface. Under these windows to the right is the stove. (Because this home is in the gas belt it is possible to use gas for fuel.) Above and at the right of the stove is a built-in cupboard which contains the seasonings, flour dredger, scissors, match box, etc. Just beneath this cabinet the washable cotton holders are hung—so as to be handy for use above the stove.

Adjoining the stove on the left is a made cabinet or work table. (See second view of kitchen). This is 36 inches high, so it is not necessary for the housewife to stoop or become round shouldered. For the top of this cabinet, an old marble top from a dresser is used. This is splendid for molding bread, making pies or placing hot vessels just removed from the stove. (Editor's Warning.—Beware of setting too large and heavy kettles on it, tho, we did that once and cracked our marble slab, that we are finding more useful in the kitchen than on the old bureau whence it came.) The cabinet has five drawers and a place for the flour and sugar. Measuring cups, knives, forks, spoons, spatulas, pans, lids—in fact, all of the smaller equipment is kept in this cabinet.

Adjoining the cabinet on the left is the sink, with a drain board to the left. Above the drain board is a cabinet corresponding to the one by the stove. In this are kept the cleaning brushes, soap and scouring powders. This is a most convenient arrangement, for the food is brought in from the ice chest or store room at the back to the sink for cleaning, then to the cabinet for preparation for cooking, then on to the stove.

On the other side of the door from the sink is a work table on rollers, which can be placed near the dining room door when serving or rolled over to the sink when washing dishes. A chair which slips under the drain board when not in use is another comfort.

OTHER END OF SAME KITCHEN
Shows sink and work cabinet on right; built-in ironing board cupboard (C) at left.

When building this kitchen, we left a space for a cupboard for the ironing board (see photograph) which is described in more detail further on. Adjoining this ironing board cupboard is a big built-in cupboard, with three sets of doors and a wide drawer. In the upper part we keep empty cans, baskets and things not often used. In the cupboard just below we keep serving dishes. The big drawer furnishes ample room for the tea towels, cleaning cloths and kitchen aprons. Below are kept the pots and cooking equipment which can not be kept in the cabinet on the other side of the room.

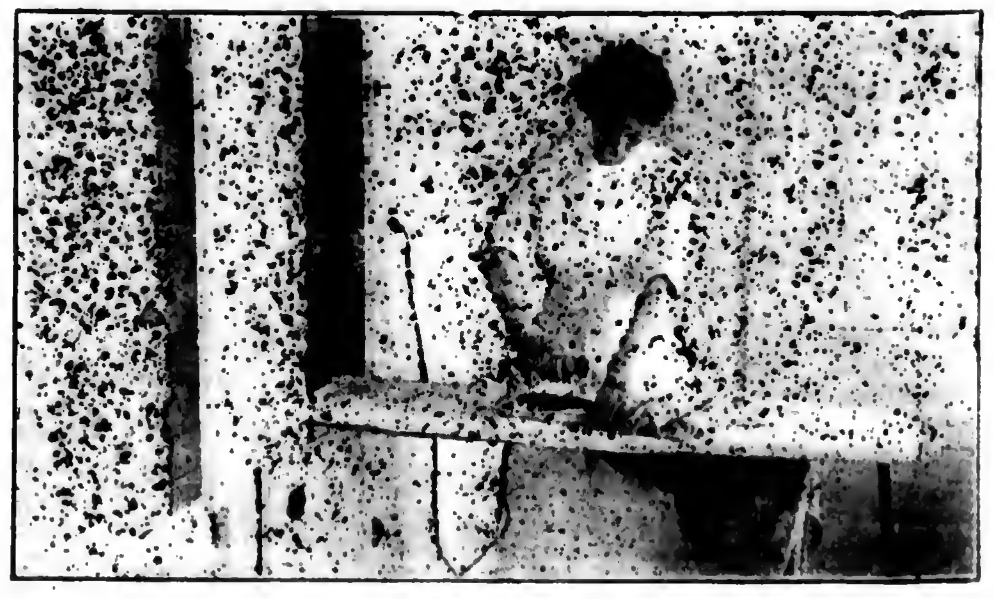
Adjoining this built-in cupboard at the left is our broom closet. The furnace chimney is built there, and there was a space 12 inches deep left. In order not to waste that space and to keep the wall even this broom closet was built in. The broom, dust pan, dish cloths, etc., are kept in here. On the inside of the door are hooks where kitchen aprons are hung, so that when the meal is over and the work completed these things need not remain out in sight.

The floor sometime will be covered with linoleum. At present it is finished with a preparation made by using ⅓ linseed oil, ⅓ paraffin and ⅓ turpentine, which was applied while hot.

The woodwork is white, and with our beautiful view from the kitchen windows out over the beautiful hills, even dish-washing is a real pleasure in our kitchen.

Our Built-In Ironing Board

People are doing their work in the "old way" in many cases where it is quite unnecessary. Many a housewife places one end of her ironing board on a table, the other on a chair back, often too low; sometimes she even stands with one foot on the chair in order to hold it in place. Here is a better way, that is possible in any home, however old. The board, used for years about as described above, was sawed off, put on hinges, a leg adjusted and now is folded up against the wall in its own cupboard when not in use, as illustrated. The closet (see photograph), into which it folds is 4 inches deep and 18 inches wide. When open for use the board stands 36 inches high; this, of course, must vary with the height of the person using it. In the space below the board, the irons, holders, etc., are kept. At the side of the cupboard is an electric connection for our electric iron, but whether you can have electricity or not, you can have such an ironing board cupboard at not very great trouble or expense.—Lena R. Gaddis.



BUILT-IN IRONING BOARD
It turns up into the cupboard when not in use.

(Editor's Note.—There is no reason why many a farm kitchen can not have an equally convenient ironing board and cupboard. And as for the ironing power, at a recent State Grange meeting, when a large group of members was visiting a farm electric power outfit factory, a goodly percentage of the farmers present confessed that they had installed electric plants and are finding that these light and power plants are rapidly paying for themselves in saving of time and labor and health, for both the men and women. "Cheapest hired help I ever had," said one farmer. With such electric plants the women can get the ironing juice from the wall beside them as conveniently as Miss Gaddis is getting hers.)

SUMMER VEGETABLE "EATS"

Beet Pudding

Peel and grade four ordinary-sized beets, mix in 2 cups milk, 1 cup sugar, ½ cup butter, 2 eggs, and flavor with 1 teaspoon vanilla. Put into a medium-sized baking dish, and bake in a moderate oven for an hour. This is good hot or cold.

Carrot Pie

Scrape and boil the carrots until they are very tender. Mash fine, and per 1 cup of the carrot allow 1 pint milk and ½ teaspoon each of cinnamon, ginger and salt, and 1 well beaten egg; then sweeten to suit your family's taste. Pour into a crust as for squash or custard pie, and bake.

Corn Waffles

Per each half cup of grated corn use ½ cup cream, 2 eggs, ½ teaspoon salt, 1 heaping teaspoon sugar, 2 teaspoons baking powder and 1½ cups flour. Add the beaten yolks of the eggs, with the cream, to the dry ingredients, including the corn, then add the whites (stiffly beaten,) and put to bake at once in the waffle irons, or bake like pancakes on a griddle. If you do not happen to have any cream, use the same quantity of milk with 1 level tablespoon of butter added.

Green Corn Fritters

One cup of corn, 1 teaspoon salt, 1 heaping cup flour, 1 egg, a few grains of red pepper 1 tablespoon salad oil, and ½ cup milk.

Beat the egg well, add the remaining ingredients, and drop by spoonfuls into smoking hot fat, and fry 8 minutes. Drain on brown paper, and serve hot.

Peas With Lettuce

One quart of peas, 2 tablespoons butter, 1 head of lettuce, 1 small onion, 1 teaspoon sugar, ½ cup water.

Put all the ingredients in a stewpan, cover and cook 5 minutes, tossing the vegetables several times. Then draw the dish to the back of the stove and let simmer ½ hour.

Vegetable Pudding

One cup raw grated carrot, 1 cup raw grated potato, 1 cup sugar, 1 cup flour, 1 cup chopped raisins, 1 teaspoon soda stirred into 1 teaspoon cold water, 1 teaspoon of mace, allspice, ground cloves and cinnamon (1 teaspoon altogether, not of each), and a pinch of salt. Mix and steam 3 hours.

Vegetable Roast

Two cups strained stewed tomatoes, 2 cups cooked lentils, 4 eggs, 2 tablespoons fat, 5 crackers rolled fine, 1 teaspoon finely powdered sage, and 1 finely minced onion. Season to suit taste, turn into a baking dish and bake until quite dry. Serve in slices with suet gravy.

Cucumber Ragout

Peel and cut some nice cucumbers into ½-inch crosswise slices. Slice up equal amounts of tomatoes and white onions. Dredge the cucumber and onion slices in flour, and fry together in salt pork fat. When brown, lay in the tomatoes, add 1 tablespoon flour rubbed to a paste with a little extra fat, stir in ½ pint water, and when thickened add a little salt, pepper to suit taste, and simmer for an hour.—Helen Lyman, Mass.

CATALOGUE NOTICE

Send 15c in silver or stamps for our up-to-date Fall and Winter 1920-1921 catalog, containing over 500 designs of Ladies', Misses, and Children's Patterns, a concise and comprehensive article on dressmaking, also some points for the needle (Illustrating 30 of the various, simple stitches) all valuable to the home dressmaker.—Pennsylvania Farmer, 261 S. Third Street, Phila., Pa.

A cotton case or bag used as a slipover cover will serve as protection to the winter blankets.

Iron baking pans used for muffins or popovers should be warmed before the batter is poured over them.

In these days, patches are no disgrace. Why not look on them as honorable wounds to our clothes—or as service stripes.

A one-piece enameled iron sink plus a high back and plus running water and a drain will do as much to make the housewife happy as a new silk dress.

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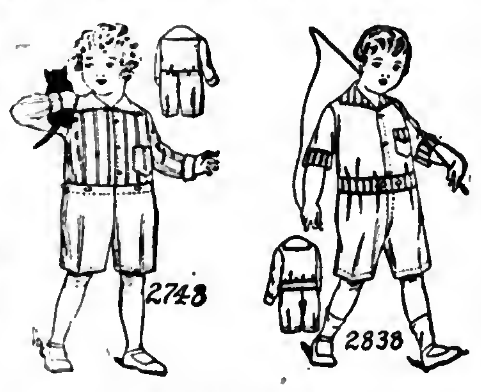
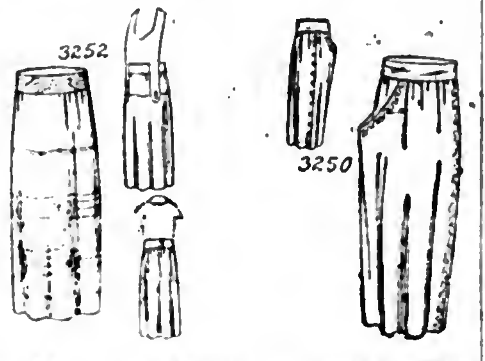
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2748.—Good suit for small boy.—For the blouse, one could use galatea, gingham, drill or linen; for the trousers, these materials are suitable, too, and likewise flannel, serge, corduroy, and father's old pants or coat. The pattern is cut in 4 sizes: 3, 4, 5 and 6 years. Size 4 requires 1⅞ yard of 27-inch material for the waist, and 1⅛ yard for the trousers. Pattern, 10 cents.



2838.—Laddie's Natty Suit.—Here is just the model for a suit for romping and outdoor wear. It is good for linen, gingham, linene, drill, pique, seersucker, and khaki. The pattern is cut in 4 sizes: 3, 4, 5 and 6 years. Size 4 requires 2⅛ yards of 36-inch material. Pattern, 10 cents.

3252.—A New Skirt.—The pattern is cut in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. A 24-inch size will require 3⅞ yards of 40-inch material. The width at lower edge is a little over 2 yards. Sports materials, linen, gingham, bordered goods, embroideries, satin, serge and foulard are attractive for this style. Pattern, 10 cents.



3250.—Novel Skirt Design.—The pattern comes in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. A 24-inch size requires 4⅛ yards of 40-inch material. The width of the skirt at the lower edge is 2 yards. As here shown, shantung in natural shade was used with braiding for decoration. Serge, satin, foulard, linen, chambrey, voile, ratine and taffeta are good for this style.—Pattern, 10 cents.

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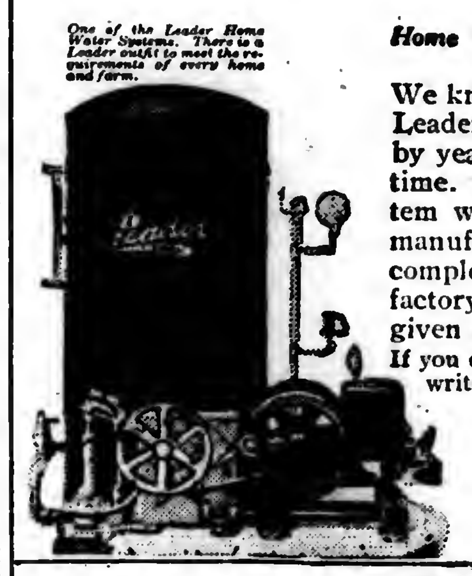
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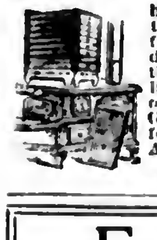

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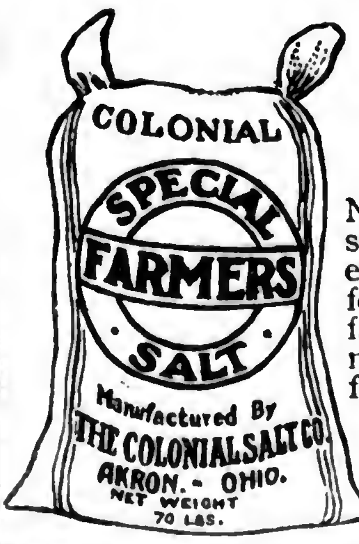

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Neighborly Talks No. 10

THE UNSELFISH NEIGHBOR

When we are with our unselfish neighbor, we almost forget to note whether the sun or the clouds prevail, such is the warmth and sunshine of his presence. His thoughts always travel beyond the boundaries of his own fields and his self interests, and embrace your fields, and your interests, personality and needs. If he has learned the rare art of receiving, as well as giving, gracefully, he will seem yet more attractive to you.

Have you noticed that some men can give gracefully who receive from others with ill grace, and who do not realize that they display selfishness in so doing, desiring all the joy of giving for themselves alone, and not being willing that a friend should share in that which they find so delightful. Your unselfish neighbor will rise above this and will be grateful for the favors, small tho they may be, that are extended to him in return for the many that his kindness offers to us.

The unselfish neighbor wears well; we understand him better as the days go by. He gives freely and expects nothing in return, but the waters on which he has sown flow back to him, rich with blessing.

And the fruitage they bear is but his own,

That has to the larger measure grown.

The unselfish neighbor alone tastes of the undiluted joys of life, for selfishness mars and blasts and withers all with which it comes in contact, and changes joy to grief.

The unselfish neighbor delights to do small errands for you, to think of your comfort, to speak a kind word of you where it will be helpful, to recommend you where he can conscientiously do so. The heart of the unselfish neighbor is like a fountain that overflows, and flowers of appreciation bloom in his pathway.

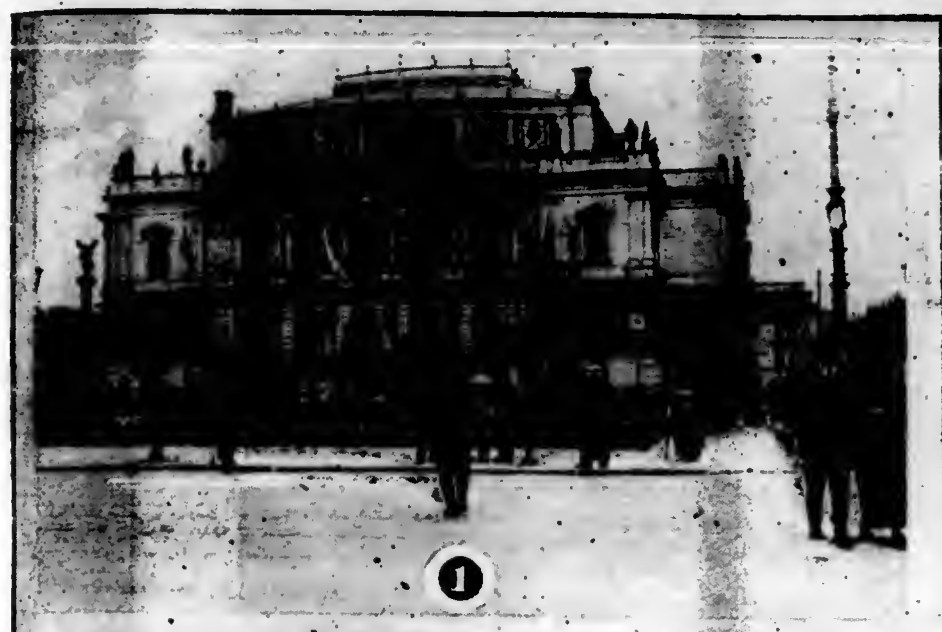
Unselfishness is a virtue that pays big dividends here and now; it brings happiness to the heart, sparkle to the eye, healing to the body and hope to the life. Unselfishness might be fairly said to be the gateway opening into the wonderful field of happiness. The gate is narrow and we must leave behind the things that are low and sordid and selfish, if we would pass safely thru and abide in the pleasant field within. Let us strike hands with the neighbor who is unselfish, and say; "I, too, would travel in the paths of unselfishness and share my blessings with my neighbors about me."

An extra file and one or two whetstones are mighty handy to have around when the tools get dull.

It isn't so much a question of what tools you use in gardening as how much you keep those working that you do use.

For a succession of bloom keep all the flowers cut so that seed pods will not form.

PASSING EVENTS IN PICTURES



(Photo, Copyright by Underwood & Underwood.)

1—"Rudolfinum," Opera House, Seat of Czecko-Slavok Parliament in Prague.
2—Where the Brussells Peace Conference Was Held.
3—"Abe" Lincoln's Boots are a good load for Little Katheryn Cummings.
4—"Man-o-War" regarded as the Worlds' Greatest Three-year-old.
5—Margaret M. Gallagher and a shell found at Waltham, Mass., believed to be Relic of the Revolution.
6—"Aeromarine S-51 Navy Cruiser" Carrying 18 Passengers. It weighs 8 tons and Has Wing Spread of 103 Feet.
7—Overturned U. S. Eagle After Storm. Seven Men Lost Their Lives From the Accident.
8—Greenwich Country Club Golf Course Where World's Finest Golfers Vie For Honors.

Whispering Smith

by Frank H. Spearman

CHAPTER XXVI

Tower W

(Continued from Last Week)

"Sure: come in. What is it?"

"The second section of the passenger train—Number Three, with the express cars—was stopped at Tower W to-night. Oliver Sollers was pulling; he is badly shot up, and one of the messengers was shot all to pieces. They cracked the safe, emptied it, and made a clean get-away."

"Tower W—two hundred and seventy-six miles. Have you ordered up an engine?"

"Yes."

"Where's Kennedy?"

A second voice answered: "Right here."

"Strike a light, Farrell. What about the horses?"

"Theyr'e being loaded."

"Is the line clear?"

"Rooney Lee is clearing it."

"Spike it, George, and leave every west-bound train in siding, with the engine cut loose and plenty of steam, till we get by. It's now or never this time. Two hundred and seventy-six miles; they're giving us our money's worth. Who's going with us, Farrell?"

"Bob Scott, Reed Young, and Brill, if Reed can get him at Sleepy Cat. Dancing is loading the horses."

" I want Ed Banks to lead a posse straight from here for Williams Cache; Dancing can go with him. And telephone Gene and Bob Johnson to sit down in Canadian Pass till they grow to the rocks, but not to let anybody through if they want to live after I see them. They've got all the instructions; all they need is the word. It's a long chance, but I think these are our friends. You can head Banks off by telephone somewhere if we change our minds when we get a trail. Start Brill Young and a good man from Sleepy Cat ahead of us, George, if you can, in a baggage car with horses that they can get there. They can be at Tower W by daybreak and perhaps pick up a trail before we reach there, and we shall have fresh horses for them. I'm ready, I guess; let's go. Slam the door, George!" In the hall Whispering Smith threw a pocket-light on his watch. "I want you to put us there by seven o'clock."

"Charlie Sollers is going to pull you," answered McCloud. "Have you got everything? Then we're off." The three men tiptoed down the dark hall, down the stairs, and across the street on a noiseless run for the railroad yard.

The air was chill and the sky clear, with a moon more than half to the full. "Lord, what a night to ride!" exclaimed Whispering Smith, looking mournfully at the stars. "Well planned, well planned, I must admit."

The men hastened toward the yard, where lanterns were moving about the car of the train guards near the Blue Front stables. The loading horses were being carefully led into the car. From a switch engine beboard had been lowered, and the hind the car a shrill cloud of steam billowed into the air. Across the yard a great passenger engine, its huge white side-rod rising and falling slowly in the still light of the moon one of the mountain racers, thick-necked like an athlete and deep-chested—was backing down for the run with the single car almost across the west end of the division. Trainmen were running to and from the Wickiup platform. By the time the horses were loaded the conductor had orders. Until the last minute, Whispering Smith was in consultation with McCloud, and giving Dancing precise instructions for the posse into the Cache country. They were still talking at the side door of the car, McCloud and Dancing on the ground and Whispering Smith squatting on his haunches inside the moving car, when the engine signalled and the special drew away from the chute, pounded up the long run of the ladder switch, and moved with gathering speed into the canyon. In the cab Charlie Sollers, crushing in his hand the tissue that had brought the news of his brother's death, sat at the throttle. He had no speed orders. They had only told him he had a clear track.

CHAPTER XXVII

Pursuit

Brill Young picked up a trail Sunday morning at Tower W before the special from Medicine Bend reached there. The wrecked express car, which had been set out, had no story to tell. "The only story," said Whispering Smith, as the men climbed into their saddles, "is in the one from the hoofs, and the sooner we get after it the better."

The country around Tower W, which is itself an operating point on the western end of the division, a mere speck on the desert, lies high and rolling. To the south, sixty miles away, rise the Grosse Terre Mountains, and to the north and west lie the solitudes of the Heart range, while in the northeast are seen the three white Saddle peaks of the Missions. The cool, bright sunshine of a far and lonely horizon greets the traveller here, and ten miles away from the railroad, in any direction, a man on horseback and unacquainted with the country would wish himself —mountain men will tell you—in hell, because it would be easier to ride out of.

To the railroad men the country offered no unusual difficulties. The Youngs were as much at home on a horse as on a hand car. Kennedy, tho a large and powerful man, was inured to hard riding, and Bob Scott and Whispering Smith in the saddle were merely a part—tho an importnt part—of their horses; without killing their mounts, they could get out of them every mile in their legs. The five men covered twenty miles on a trail that read like print. One after another of the railroad party commented on the carelessness with which it had been left. But twenty miles south of the railroad, in an open and comparatively easy country, it was swallowed completely up in the tracks of a hundred horses. The railroad men circled far and wide, only to find the herd tracks everywhere ahead of them.

"This is a beautiful job," murmured Whispering Smith as the party rode together along the edge of a creek-bottom. "Now who is their friend down in this country? What man would get out a bunch of horses like this and work them this hard so early in the morning? Let's hunt that man up. I like to meet a man that is a friend in need."

Bob Scott spoke: "I saw a man with some horses in a canyon across the creek a few minutes ago, and I saw a ranch-house behind those buttes when I rode around them."

"Stop! Here's a man riding right into our jaws," muttered Kennedy. "Divide up among the rocks." A horseman from the south came galloping up the creek, and Kennedy rode out with an ivory smile to meet him. Two two men parleyed for a moment, disputed each other sharply, and rode together back to the railroad party.

"Haven't seen any men looking for horses this morning, have you?" asked Whispering Smith, eying the stranger, a squat, square-jawed fellow with a cataract eye.

"I'm looking for horses myself. I ain't seen anybody else. What are you looking for?"

"Is this your bunch of horses that got loose here?" asked Smith.

"No."

"I thought," said Kennedy, smiling, "you said a minute ago they were."

The stranger fixed his cataract on him like a flash-light. "I changed my mind."

Whispering Smith's brows rose protestingly, but he spoke with perfect amiability as he raised his finger to bring the good eye his way. "You ought to change your hat when you change your mind. I saw you driving a bunch of horses up that canyon a few minutes ago. Now, Rockstra, do you still drag your left leg?"

The rancher looked steadily at his new inquisitor, but blinked like a gopher at the sudden onslaught. "Which of you fellows is Whispering Smith?" he demanded.

"The man with the dough is Whispering Smith every time," was the answer from Smith himself. "You have about seven years to serve, Rockstro, haven't you? Seven, I think. Now what have I ever done to you that you should turn a trick like this on me? I knew you were here, and you knew I knew you were here, and I call this a pretty country; a little smooth right around here, like the people, but pretty. Have I ever bothered you? Now tell me one thing—what did you get for covering this trail? I stand to give you two dollars for every one you got last night for the job, if you'll put us right on the game. Which way did they go?"

"What are you talking about?"

"Get off your horse a minute," suggested Whispering Smith, dismounting, "and step over here toward the creek." The man, afraid to refuse and unwilling to go, walked haltingly after smith.

"What is it, Rockstro?" asked his tormentor. "Don't you like this country? What do you want to go back to the penitentiary for? Aren't you happy here? Now tell me one thing—will you give up the trail?"

"I don't know the trail."

"I believe you; we shouldn't follow it anyway. Were you paid last night or this morning?"

"I ain't seen a man hereabouts for a week."

"Then you can't tell me whether there were five men or six?"

"You've got one eye as good as mine, and one a whole lot better."

"So it was fixed up for cash a week ago?"

"Everything is cash in this country."

"Well, Rockstro, I'm sorry, but we'll have to take you back with us."

The rancher whipped out a revolver. Whispering Smith caught his wrist. The struggle lasted only an instant. Rockstro writhed, and the pistol fell to the ground.

"Now, shall I break your arm?" asked Smith, as the man cursed and resisted. "Or will you behave? We are going right back and you'll have to come with us. We'll send some one down to round up your horses and sell them, and you can serve out your time—with allowances, of course, for good conduct, which will cut it down. If I had ever done you a mean turn I would not say a word. If you could name a friend of yours I had ever done a mean turn to I would not say a word. Can you name one? I guess not. I have left you as free as the wind here, making only the rule I make for everybody—to let the railroad alone. This is my thanks. Now, I'll ask you just one question. I haven't killed you, as I had a perfect right to when you pulled; I haven't broken your arm, as I would have done if there had been a doctor within twenty-five miles; and I haven't started you for the pen—not yet. Now I ask you one fair question only: Did you need the money?"

"Yes, I did need it."

Whispering Smith dropped the man's wrist. Then I don't say a word, If you needed the money, I'm not going to send you back—not for mine."

"How can a man make a living in this country," asked the rancher, with a bitter oath, "unless he picks up everything that's going?"

"Pick up your gun, man! I'm not saying anything am I?"

"But I'm damned if I can give a double-cross to any man," added Rockstro, stooping for his revolver.

"I should think less of you, Rockstro, if you did. You don't need money anyway now, but sometime you may need a friend. I'm going to leave you here. You'll hear no more of this, and I'm going to ask you a question: Why did you go against this when you knew you'd have to square yourself with me?"

"They told me you'd be taken care of before it was pulled off."

"They lied to you, didn't they? No matter, you've got their stuff. Now I am going to ask you one question that I don't know the answer to; it's a fair question, too. Was Du Sang in the penitentiary with you at Fort City? Answer fair."

"Yes."

"Thank you. Behave yourself and keep your mouth shut. I say nothing this time. Hereafter leave railroad matters alone, and if the woman should fall sick or you have to have a little money, come and see me." Smith led the way back to the horses.

"Look here!" muttered Rockstro, following, with his good eye glued on his companion. "I pulled on you to quick, I guess—quicker'n I'd ought to."

"Don't mention it. You didn't pull quick enough; it is humiliating to have a man that's as slow as you are pull on me. People that pull on me usually pull and shoot at the same time. Two distinct movements, Rockstro, should be avoided; they are fatal to success. Come down to the Bend sometime, and I'll get you a decent gun and give you a few lessons."

Whispering Smith drew his handkerchief as the one-eyed man rode away and he rejoined his companions. He was resigned, after a sickly fashion ."I like to play blindman's-bluff," he said, wiping his forehead, "but not so far from good water. They have pulled us halfway to Grosse Terre Mountains on a beautiful trail, too beautiful to be true, Farrell—too beautiful to be true. They have been having fun with us, and they've doubled back thru the Topah Topahs toward the Mission Mountains and Williams Cache—that is my judgment. And aren't we five able-bodied jays, gentlemen. Five strong-arm suckers? It is an inelegant word; it is an inelegant feeling. No matter, we know a few things. There are five good men and a led horse; we can get out of here by Goose River, find out when we cross the railroad how much they got, and pick them up somewhere around the Saddle peaks, if they've gone north. That's only a guess, and every man's guess is good now. What do you think, all of you?"

"If it's the crowd we think it is, would they go straight home? That doesn't look reasonable, does it?" asked Brill Young.

"If they could put one day between them and pursuit, wouldn't they be safer at home than anywhere else? And haven't they laid out one day's work for us, good and plenty? Farrell, remember one thing: there is sometimes a disadvantage in knowing too much about the men you are after. We'll try Goose River."

It was noon when they struck the railroad. They halted long enough to top a freight train, send some telegrams, and ask for news. They got orders from Rooney Lee, had an empty box car set behind the engine for a special, and, loading their horses at the chute, made a helter-skelter run for Sleep Cat. At three o'clock they struck north for the Mission Mountains.

(Continued Next Week.)

A SQUARE DEAL

Our dearly beloved friend and former President, Theodore Roosevelt, had a vision and thought of the future. One week before his death he sent to publishers an article, parts of which are published, they are so true and fundamental to the nation's well being.

"The Farmer, the working man and the business man are, of course, the three people upon whose welfare the welfare of all the rest of us and of the country depends.

"The farmer is emphatically the producer. He has not had a square deal. He has not been put in the position to which he is entitled. It behooves us to get men competent to speak for the farmer, and to make an earnest affirmative effort to start this nation on a course of policy which will put the farmers of this nation on a level never elsewhere attained."

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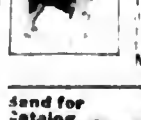

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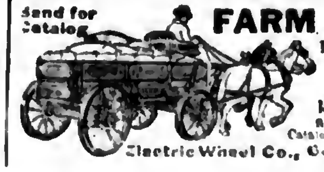

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PHILADELPHIA OFFICE, 1913 MARKET STREET

INTERESTING NOTES CONCERNING EASTERN FRUIT GROWING

New York State fruit growers have reason to rejoice over the recent legislative appropriation of $17,000 to become immediately available for the construction of a cold storage warehouse at the State College orchards.

The farmers' joint committee that inspected the work of the Pomology department at the college last fall recommended the construction of a 2,000 barrel capacity storage house and packing plant as being greatly needed. A plant of this capacity would have cost about $28,000. But the fruit growers will be greatly relieved to have this help for the college, as they know it will be very promptly reflected in the practical service the college will be able to offer fruit growers.

One practical fruit grower member of the committee in speaking on the needs of the fruit growers, referred to the big planting of young apple trees in this state during the war, because help was very scarce, grew almost none at all, as they were badly neglected. "I do not see how we fruit men are to go on," he said, "unless we can depend on the college to give us more of the practical aid that we know it could and would give were it properly financed. If these trees can have the care they should have for the next five years or more the apple output of this state could be doubled."

One great handicap in the work is the scarcity of trained men to supervise orchard work. The farmer committee, or the fruit section of it included, E. C. Gillette, fruit grower and secretary of the New York State Horticultural Society, Grant Hitchings, F. A. Saulsbury, T. Costello, W. P. Rogers, B. D. Van Buren, W. C. Buell, W. Ten Broeck, C. K. Scoon, all leading fruit growers and E. H. Anderson head of the freight investigation for the New York Central railroad.

They recommended a packing plant to teach students proper packing methods, and the marketing of fruit and packing house management also a laboratory for the study, teaching and investigation of the science of the manufacture of fruit by-products and the preservation of fruit. These good things it would seem, will have to come more slowly.

The Cornell College of Agriculture may be depended upon to do all that it can with the means provided to direct the work of the fruit growers of the state. A 25 percent salary increase for all teachers in the college has been secured and a few new positions will be created.

New conditions are making new and enormous demands on the college. Not the least of which come from fruit growers. Every year the need of expert knowledge becomes more and more vital in the production of fruit.

Every year the need of better marketing methods is demonstrated, perhaps never so convincingly as this year. It is not too much to expect of the college that it assume a leadership in showing growers how to market their fruit more advantageously.

Everyone admits that the potential consumption of fruit has hardly been imagined as yet, much less that the limit has been reached. The actual demand for fruit is no measure of the amount that might be consumed were fruit growers to acquaint the public with the virtues of fruit so efficiently as the packing houses have done with the virtues of their products. Not a tenth of the apples that would be demanded are being produced or even planned for in future.

Look at the situation brought about at the present time, after New York's and the Virginia's light apple crop of last year. Eastern fruit was poorly colored and the size of the crop was unusually small.

The Western growers with their perfectly organized machinery for making the best use of such opportunities as this presented promptly invaded, not only all the natural eastern markets for eastern apples, but every possible market in the United States. They developed new markets, placing highly colored western boxed apples in all eastern cities, also in the south and south west, at prices never before equalled.

Boxed fruit proved to be 25 percent in excess of the fall estimates. Last year Washington shipped fully two-thirds of the whole carload movement of boxed apples. The eight states producing boxed apples have at present released over 40,000 cars as against 25,581 cars for the entire previous season.

Eastern and middle west markets have this season used twice the volume of former consumption of boxed apples. In some markets the increase corresponded with a similar decrease in eastern apples offered.

There are fine prospects for eastern apple growers. But they will have to improve their marketing and packing methods.

The North American Fruit Growers' Exchange offers splendid opportunities to fruit growers to better their sales of fruit. It handles carload shipments and is run on a purely service basis, not owning or speculating in the products it sells.

It is the only service of the kind in the United States, and has grown steadily in the ten years of its existence. It employs from 400 to 500 experienced salesmen, who cover all sections of this county, giving their skilled service to organizations not only of fruit growers, but of vegetable and other produce associations, for just the period the service is needed and no longer. There is no support of an expensive force during idle seasons, as there are no idle seasons, all being full from the onion season in Texas, farther north to strawberries, etc., and later for potatoes, cabbage, grapes, etc.

Many localities are considering the advantages offered by this method of selling not only fruit but other farm produce.—M. G. F.

To the York Imperial

Monument in Commemoration of the discovery of the York Imperial Apple about 100 years ago by Jonathan Jessop. Jonathan Jessop a grandson is seen at the left. John C. Schmidt present owner of the Farm, stands at the right.

Early History

Springwood Farm situated two miles south of York, was the family residence of Jonathan Jessop during the early part of the last century. He was a merchant in York and a leading member of the Society of Friends, whose meeting house is now standing on West Philadelphia Street, York.

In 1820 Jonathan Jessop had a nursery on his farm where he raised young apple trees, then popular in this region His attention was called to a seedling found on the farm of John Kline, now a part of the borough of Hallam. This fruit, altho imperfect, was found to have a delicious flavor.

Mr. Jessop grafted a stem from this seedling on another tree and thus propagated a new variety of apple. He raised a large number of small trees, which had ready sale among the fruit growers of York County. In his own orchard he planted one of these trees and when it began to bear, grew what is now known as the "York Imperial Apple."

Everyone who had used this fruit discovered that it kept well and retained its delicious flavor during all the winter months, and even to May and June. Fruit growers from Virginia and elsewhere ordered trees from Mr. Jessop's nursery, and in a few years this apple became very popular everywhere it was cultivated.

At first his Quaker neighbors and members of the Society down in Virginia, called it "Jonathan's Fine Winter." It next found its way to the State of New York, still retaining the name first given.

In 1855, Charles Downing, a pomologist of New York State, called it the "Imperial of Keepers," and suggested that it should be named the "York Imperial," which name it has since borne. This apple is now raised in all the states of the Middle West, as well as Virginia, Pennsylvania and New York. It has special commercial value, because it can be kept several months after it is taken from the tree. The original site where Jonathan Jessop propagated the York Imperial, is now to be marked by a tablet given by the Horticultural Society of Pennsylvania.

Springwood Farm is now owned by Mr. John C. Schmidt.

GROWING AND HARVESTING OATS

In your issue of July 31 there was an article about sowing two year-old oats. I sowed two year-old oats this spring, and also sold some of my two year-old Long's White Tartar oats to my neighbors at $2 a bushel.

We are just harvesting a very fine crop. Two-year-old oats will grow but they must be in good condition before they are put into the barn or they will become "mow burnt" and that will spoil the germination qualities of the seed.

I cut my oats with the binder and then shock them, 12 sheaves to a shock, six sheaves up, two sheaves on each side, then cock it with two sheaves butts-up and heads down nicely on each side of the shock.

We put about one-half of our oats away yesterday. Last night it rained but the inside of the shocks are nice and dry. Of course, I prefer to put it away without rain but you get caught sometimes so it is best to put it up in shocks. I have been farming for 33 years and my oats have always grown well.—A. S. B., Bucks Co., Pa.

CULTIVATION INCREASED FRUIT YIELD ELEVEN FOLD

Proper cultivation, which included the turning under of cover crops, brought eleven times as much fruit as where the trees were left in sod, and also increased the growth of the trees 43 percent, according to the results of ten years' experimental work by Purdue University. Different methods of soil management were tried out in the orchard, an extremely heavy straw mulch scattered under the trees giving results practically equal to the tillage.

APPLE PACKING REGULATIONS

Printed copies of apple packing regulations issued by the Bureau of Markets, Pennsylvania Department of Agriculture, are being mailed to growers, dealers, and other inerested parties. Copies will be sent to any one interested by addressing the Pennsylvania Bureau of Markets, Harrisburg, Pa.

The regulations are made under the authority of the Pennsylvania Apple Packing Law and will go into effect this season. They require that all closed packages of apples grown in Pennsylvania shall be marked with the name and address of the packer, the name of the variety, and the minimum size or the numerical count of the apples within the package. Existing laws require the package to be marked with its capacity in terms of dry measure. The regulations also require the face of a package of apples to fairly represent the average of the apples in the package. There is a tolerance of five percent allowed for fruit which may be below the size marked upon the package.

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Markets

PHILADELPHIA PRODUCE

—Aug. 28, 1920.

Supplies of potatoes are heavier, consequently the market showed an easier tendency. There were about 18 cars from N. J. in 150- lb. sks., and Eastern Shore potatoes in bbls., in addition to the usual supplies in ⅝-bu. bkts., hauled in by the n'by. farmers. The Eastern Shore No. 1 bbl. stock sold at $4@4.50 bbl., with No. 2's and culls at $1.25@2. N. J. cobblers in 150-lb. sacks sold at $3.85@4.10 sk., giants or long potatoes at $3.25. No. 2's brought $1.50@1.75 sk. The supplies hauled in by the n'by farmers sold at 90c@$1 ⅝ bsk., with an occasional load at $1.05@$1.10, while No. 2's ranged from 40@65c.

Sweet potatoes are in light supply and firm. Eastern Shore No. 1's sold at $8.50 bbl., and $5 bbl., for No. 2's. N. J. sweet potatoes are in light supply and firm at $2@2.25 ⅝ bsk. for No. 1's and 85c@$1.25 ⅝ bsk., for No. 2's.

Vegetables.—Nearly all kinds of N. J. vegetables were in light supply and the market ruled firmer and higher. Green beans, 50c@$1 ⅝ bsk.; wax beans, 50c@$1 ⅝ bsk. Beets, $1@2.50 100 bches., and 50@75c hpr. Cabbage is one of the exceptions, and prices ranged at 10@20c ⅝ bsk. with a few sales at 25c bsk. Carrots, 50@75c ⅝ bsk., and 75c@$1.25 hpr. Cauliflower is coming from western N. Y. and selling at $2@2.50 crate for fancy and $1@1.25 crate for choice.

Celery is mostly from N. Y. and selling at $4@4.50 crate in the rough, and 25@75c bch., for washed. N. J. hearts are selling at 5@8c bch. Corn 40@75c ⅝ bsk., and $1@1.65 100 ears. Most cucumbers are from N. Y. and selling at $1.50@2.50 bus., with the dills at $2.50@3 bush. Eggplants bring 15@35c ⅝ bsk. Garlic, 10@15c bbl.

Practically all lettuce is coming from N. Y., and as it is scarce it is selling at $2.25@3.25 box containing about 2 doz., hds., and $2.50@3 hpr. Lima beans, $1.50@2 hpr., and $1@1.40 ⅝ bsk. Onions bring 40@60c ⅝ bsk. for the yellow onions and $1@2 bus. hpr., for the white onions. Okra shows the wide range of 50c@$1.25 ⅝ bsk., as to size, the large not being wanted.

Parsley $1@1.50 bus. hpr. Green peppers 30@40c ⅝ bsk. hot or finger peppers, 65@75c bsk., and tomato peppers, $1@1.25 ⅝ bsk. Romaine is scarce and selling at $2 box. Squash is getting scarcer and sells at 25@35c bsk. Tomatoes are showing a wide range, some selling at 50c@$1 bsk., while some fancy Penn. tomatoes are bringing $1@1.50 ⅝ bsk. Turnips are irregular and show the wide range of 25@65c ⅝ bask. movement being rather slow.

Fruits.—The market is being well supplied with apples and low prices continue to prevail, altho there was some improvement noted in the demand. Apples are now coming from Va., Del., Md., Penn. and N. J., as well as N. Y. Barrel apples sell about as follows: Duchess, $2.75@4; Maiden Blush, $5@5.50; Gravenstein, $4@5; Rambos, $4@4.50; Wolf Rivers, $5@5.50; Pippins, $3.50@5. Bushel apples range about as follows: Maiden Blush, 75c@$1.75; Duchess, 75c; Rambos, $1@1.25; Lovells, $1. Various other varieties 60c@$1.25. Del. hpr., bring from 75c@$1.25 as to variety. N. J. ⅝ bsks. range from 50c@$1 on No. 1 apples and 25@60c on culls and No. 2s.

Del peaches sold at $2.75 bu. for the Elbertas. Penns. sold mostly at $1@2 bu., and N. J., ⅝ bsk. from 75c@$1.75 bsk. A few grapes are coming from Del. and selling at 20@25c per 4 qt. bsk., and $1.25 half bus. bask. There were five cars of N. Y. plums here this morning. Niagaras sold at 25@28c per 4 qt. bsk. Abundance 23@25c and Burbanks at 20@25c. Cantaloupes are in free supply and have been ruling very low. N. J. supplies most altho a few far western are still coming. The N. J. cantaloupes show the wide range of 25@65c ⅝ bsk. as to condition with some culls as low as 10@15c bsk.

Watermelons seem to have had their day for this season and are selling at low prices. Most of them from Del. and Md. sell at $25@225 car, and from N. J., which sell from $10@30 hunored. Some Clapp Favorite pears sold at $3.25 bus. and Bartletts, at $3@5 bus.

Poultry.—There has been a good active market for live poultry and prices are ruling firm at about the following quotations: heavy fowls 36@38c; light to medium 33@4c; Leghorn fowls, 29@31c; old roosters 23@24c; Spring chickens weighing 2 to 3 lbs., 38@49c; broiling chickens not leghorns 34@36c; leghorn broilers, 30@32c lb. Ducks 30@33c.

Eggs.—The market is firmer and higher than a week ago. Penn. and other n'by current receipts are selling at 56c doz., with firsts at 57@59c and ordinary to fair, 50@54c; strictly fine selected and candled eggs are now jobbing at 68@69c doz. Western firsts are quotable at 55@56c doz. and western firsts at 57@59c doz.

LANCASTER PRODUCE

—Aug. 28, 1920.

Favored by the demand of canning season, farmers today arrived in such large numbers that the curb market stretched around a whole block. Eggs are advanced to 60c a dozen. Tomatoes were offered in large quantities, and sold as low as twenty cents per half peck. There was only a fair demand for peaches at $1.50 and $2.00 per basket. Farmers peddled potatoes from door to door with prices lower than last week. The quotations:

Butter and Eggs.—Country butter, 65@70c per lb.; creamery butter, 68@72c per lb.; fresh eggs, 60c per doz.

Poultry.—Dressed fowls $1.25@2.25 each broilers, 75c@$1 each; squabs, 30@50c each.

Vegetables.—Green beans 15c per half peck; lima beans, 20c per quart; cabbage 5@10c per head; beets, 5@10c per bunch cauliflower, 15@30c per head; corn, 15@20c per doz.; celery 12@15c per stalk; egg plants 15@20c each; lettuce 15@20c per head; peas, 40@50c per half peck; potatoes, 25@28c per half peck; $1.75@1.85 per bu.; sweet potatoes, 40@50c per half peck; spinach, 10@15c hf. pk.; tomatoes, 20c per hf. pk.; do., 60c per basket; turnips, 40c per hf. pk.

Fruits.—Apples, 20@30c per hf. pk.; blackberries, 20@25c per box; cantaloupes, 5c each; elderberries, 15c per qt.; huckleberries, 30@35c per qt.; pears, 20@30c per hf. pk.; peaches, $1.50@2 per basket; plums, 10c per qt.; watermelons, 30@60c each.

YORK PRODUCE MARKETS

—Aug. 28, 1920.

Weather conditions have, in a measure aided the producer by causing a lot of rot in the field, saving the labor of gathering the crop and thus relieving the congested markets. Everything is pelntiful, but there are indications of a rally in prices.

Eggs.—48@50c per dozen.

Butter.—Country, 60@65c lb.; separator, 65@70c lb.; milk, 14c qt.

Poultry.—Hens, 27@30c lb.; springers, 32c lb.; dressed, $1@2.50 each.

Vegetables.—Potatoes, 20@35c ½ pk.; $1@2 per bu.; cabbage, 5@10c hd.; lettuce, 5c hd.; beets, 5c bch.; radishes, 5c bch.; onions, 5c bch.; 20@30c ½ pk.; lima beans, 15@20c qt.; green beans, 15@20c ½ pk.; peas, 30c ¼ pk.; corn, 20@35c doz.; eggplants, 5@15c each; peppers, 2@3c each; cucumbers, 80c@$1.25 per 100.

Fruit.—Apples, 10@40c ½ pk.; 50c@$2 per bu.; plums, 8@20c bx.; pears, 5@15c bx.; peaches, 10@15c bx.; $1.50@2 basket; blackberries, 20@25c bx.; elder berries, 10c ½ pk.; tomatoes, 5@8c bx.; 50c@$1.50 per bu.

Retail Grain Market.—Wheat, $3; corn, $2; oats, $1; rye, $1.75; bran, $3 per cwt.; middlings, $4 per cwt.

Wholesale Grain Market.—Wheat, $2.45; corn, $1.56; oats, 80c; rye, $1.45; bran, $2.75 cwt.; middlings, $3.75 cwt.

NEW YORK PRODUCE

—Aug. 28, 1920.

Butter.—Dull; receipts, 13,838; creamery higher than extras, 57¼@58c; creamery, extras (92 score), 57c; creamery, firsts, (88 to 91 score), 51½@56¼c; packing stock, current make, No. 1, 43@44c.

Eggs.—First; receipts, 22,263; fresh gathered, extra firsts, 58@60c; fresh-gathered firsts, 54@57c; state, Pennsylvania and nearby western hennery whites, firsts to extras, 65@75c; state, Pennsylvania and nearby western hennery browns, extras, 64@65c; state, Pennsylvania and nearby gathered browns and mixed colors, firsts to extras, 54@62c.

Cheese.—Firm; receipts, 5,948 state whole milk, flats, current make, white and colroed, specials, 28½@29c; do., average run, 27@28c; state, whole milk, twins, current make, specials, 27¾c; do., average run, 26½@27½c.

Live Poultry.—Steady, broilers, by freight, 34@38c; fowls, 34@37c.

Dressed Poultry.—Steady and unchanged.

Vegetables.—Potatoes, bbl., L. I., bbl., $3.50@4.50; J'y, 165-lb., $3.50@4.50; Sweets, bskt., 1's, $3@4; Beans, bskt., Wax, 60c@$2.50; Green, 50c@$2.25; Beets bbl., $2@2.50; Carrots, n'by, 100, $1@2; Corn, J'y, 100, $1@3; J'y, bsk., 75c@$1.75; Celery, crt., State, bch., 15@90c; J'y., bch., 15@75c; Cucumbers, State, bsk., $1@2; J'y, bsk, 50c@$1.50; Cabbages, L. I., bbl., 50c@$1; J'y, bbl., 50c@$1; Cauliflowers, n'by, bbl., State, crt., $2.50@4; Eggplants, J'y, box, 40@60c; Lima Beans, J'y, bsk., 50c@$1; Lettuce, State, crt., $1@2.25; n'by, bbl., $1@2.50; Okra, J'y, crt., $2@3; Onions, state, Wh., bsk., $1.50@2; Yel., bsk., $1@1.50; Jersey, Wh., bsk., $1@1.65, Yel., bsk., $1@1.50; Peppers, Green—bbl., $1@1.50; Peas, state, bsk., 50c@$3; J'y, bsk., 50c@$1.50; Squash, Wh., bbl., $1@2; Yel., bbl., $1@2; Turnips, White, bbl., $1.50@3.50; Tomatoes, Up-J'y, bx., 50c@$1.50; So. Jersey, Acme, 50c@$1.25; Stone, 50c@$1; Grant, 25@75c; J'y, 12-qt. bskt., 20@40c J'y. carrier, 50@$1.25.

Fresh Fruits.—Apples—baskets, 50c@$2; barrels, $3@6.50; boxes, $3.75@4. Pears, boxes, $3@3.50. Peaches, crate, J'y, Elbta, $2.50@3.50; J'y, Belle, $1.50@3.25; J'y, Cham, $1.50@2.25. Plums, S'n, bskt., 40@50c; State, bsk., 35@45c; 16 qt. bsk., $1.25@1.50.

BALTIMORE PRODUCE

—Aug. 28, 1920.

Butter.—Creamery, Western Separator, extras, 57@58c; do., firsts, 56@57c; do., prints, ½ pound, extras, 59@60c; do., firsts, 57@58c; do. 1 pound, extras, 59@60c; do., firsts, 57@58c; nearby creamery, xtras, 48@50c; do., firsts, 46@47c; dairy prints, Md., Penn. and Va., extras, 37@38c; do., firsts, 36@37c; storepacked, 37@38c.

Eggs.—Western, Md., Penn. and nearby firsts, 52c; Eastern Shore, Md. and Va., firsts, 52c; Western (Ohio), 51@52c.

Live Poultry.—Chickens, spring, large, 35c lb., do., small, 32@33c lb.; do., old roosters, 21@22c lb.; do., old hens, over 4 lbs., 36c lb.; do., small, 35c lb.; do., white Leghorn hens, 35c lb.; do. young white Leghorns, 1½ pounds, 32c lb.; do., under 1½ lbs., 30c lb. Ducks, Muscovy and Mongrel, old, 25c lb.; do., white Pekins, young, 32@33c lb.; do. Puddle 4 lbs., and over, 30c lb.; do., smaller, poor, 23@25c lb. Pigeons, old pair, 35@40c; do., young pair, 35@40c. Guinea Fowl, young, 1½ pounds, each, 60c; do., smal 1@1¼ pounds each 40@50c.

PITTSBURGH PRODUCE

—Aug. 28, 1920.

Butter and Cheese.—Prints, 62@62½c; Tubs, 61½@62c; Cooking, 52@53c; Ohio, 57@58c; Cheese.—New York full cream, 33@34c; Wis. Swiss, 58@60c; Phila. cream doz., $1; Longhorns, 35@36c.

Eggs.—Fresh [illegible] market [illegible] Current receipts [illegible]

Produce.—Potatoes, J'y Cob., 150-lb. sk., $5@5.25; Sweet potatoes, hpr., $2.50@2.75; Beans, wax and green, hpr., $1@1.75; do., lima, hpr., $2@2.25. Onions, sack, $3.25@3.50 Cabbage, h. g., bu., 50@65c; Lettuce, h. g. box, $1@1.75; Turnips, bu. $2.25@2.50; Green corn, h. g., bu., $1.75@2.25; Tomatoes, bsk., 50@65c; Cucumbers, do., h. g., chip, 50@90c. Carrots, new, dozen, 35@40c; Beets, new, dozen, 35@40c. Celery, bunch, 25@50.c Peppers, bbl., $2@2.50.

Fruits.—Apples, bu., $1@1.75; do., bbl., $4@6. Pears, Bartlett, box, $5@6; do., N. Y., bu., $3.75@4; Watermelons, each, 50@90c. Peaches, crt., $2.50@4; do., bu., $1@4.50; do., clings, crate, $1@2.

PHILADELPHIA LIVESTOCK

—Aug. 28, 1920.

Receipts for the week ending Aug. 28, 1920, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Totals for week	2,010	8,256	8,448
Previous Week	2,335	6,252	5,675

Calves.—Receipts of calves were 1,426 head against 1,879 head previous week.

Beef Cattle.—Steers were firm and higher, with an improved demand. Cows of desirable quality sold fairly and ruled steady. Veal of fine quality was in fair request and values were well maintained. Quotations: Steers, good to choice, $15@16.50; fair to good, $13.50@15; common to fair, $12@13.50; cows, good to choice, 8½@10c; do., fair to good, 7@8½c; bulls, $7@10c; calves, extra to choice $19@20; fair to good, $16@18; common, $10@12; Tennessee, $13@15; other southerns, $6@11.

Sheep and Lambs.—The market for sheep of extra quality was firm and prices were slightly higher. Lamb ruled firm and higher, with a good demand for desirable stock. Quotations: Sheared sheep, wethers, extra, $9.50@10; do., good to choice, $7.50@8.50; do., medium, $5@6; do., common $2@3; ewes, heavy, fat, $6@7; lambs, spring, choice, $16@16.50; medium, $13@15; common, $9@11.

Hogs.—The market was quiet and unchanged, with ample offerings. We quote: Best western, $18@18.50; good, nearby, $16.25@16.75.

City Dressed Stock.—Steers, heifers and cows were in better demand and firm under light offerings. Sheep and veal were firm and some kinds were higher. Lamb of desirable quality sold fairly and ruled steady. Hogs were dull and easier. We quote: Steers, 20@28c; heifers, 18@26c; cows, choice, 18@21c; cows, light, 12@16; calves, city dressed choice, 29@31c; calves, country dressed, 25@27c; lambs, spring, choice, 30@32c; sheep, 10@22c; hogs, 23c.

PITTSBURGH HAY AND GRAIN

—Aug. 30, 1920.

Receipts of hay are the lightest they have been for a considerable period. All dealers are practically out of hay and are eager to take anything at a reasonable figure.

Straw receipts continue very light but are about equal to the demand with the exception of good oat straw, which can be placed on arrival at top figures. Oats and ear corn decidedly weak. Difficult to place. Shelled corn market quiet but arrivals will bring quotations. The following prices can be realized:

Old and new 1 Timothy hay, $38@38.50; old and new Standard, $35.50@36; old and new No. 2 Timothy hay, $33@34; old and new No. 3 Timothy hay, $29.50@30.50; old and new No. 1 Light Clover Mixed, $33@34; **No. 1 Oat Straw, $15@15.50**; No. 2 Oat Straw, $14.50@15; No. 1 Wheat Straw, $14.50@15; No. 2 Wheat Straw, $14@14.50; No. 1 Rye Straw, $15@15.50; No. 2 Rye Straw, $14.50@15; No. 2 Yellow ear corn, $1.69@1.70; No. 2 yellow shelled corn, $1.69@1.70; **No. 2 white oats, 75½@76½c.**

NEW YORK HAY AND GRAIN

—Aug. 28, 1920.

Feed.—The market for mill feed was very inactive. Mills were inclined to be firm as to price, but the trade was apparently well supplied with feed purchased some time ago.

Quotations: City feed bran, $50; middlings, $58, in 100-pound sacks; red dog, $82, nominal, in 100-pound sacks: Western spring bran, $52; standard middlings, $62; flour middlings, $71; red dog, nominal, all in 100-pound sacks, 30-day shipment. Oat feed, $35; rye middlings, $60; white hominy, feed, $67; all in 100-pound sacks. Cottonseed oil meal, $62@63; linseed oil meal, $64. in 100-pound sacks.

Hay and Straw.—Stocks continue to clean up well and the tone is rather firm thruout with some advance on certain grades of large baled timothy hay, but the small bales are still offering at old prices with some urgency to clean up because of storage charges. Very few invoices coming to hand. Rye straw about steady. Oat and wheat straw stronger.

Hay—Large Bales, Timothy, No. 1, $44@46; No. 2, $40@43; No. 3, $37@40; Shipping, $33@36; No grade, $25@32.

Clover, Mixed—Fancy, $40@43; No. 1, $36@39; No. 2, $32@35. Straw—Large Bales, No. 1 rye, $20@21; No. 1 oat, $13; No 1 wheat, $12.

Wheat.—No. 2 Red c. i. f., $2.73½; No. 2, hard winter, $2.73½.

Corn.—No. 2 Yellow, $1.82.

Oats.—No. 2 White, 86c; No. 3, White, 85c; rye, c. i. f., $2.27; barley, feeding, $1.14.

PHILADELPHIA HAY AND GRAIN

—Aug. 28, 1920.

Baled Hay and Straw.—Receipts, 192 tons of hay and 2 cars of straw, quiet but steady. We quote: Old timothy hay, No. 1, none here; No. 2, $31@32; No. 3, $27@29; sample, $23@25, no grade $18@21; old clover-mixed hay, light mixed, $29@30; No. 1 mixed, $27@28; new hay, as to quality and condition $25@30. Straw.—No. 1 straight rye, $17@17.50; No. 2 do., $16@16.50; No. 1 tangled rye, $15@15.50; No. 2, do., $14@14.50; No. 1 wheat straw, $12.50@13; No. 2 do., $11.50; No. 1 oat straw, $13.50@14; No. 2 do., $12.50@13.

Bran.—Steadily held. Car lots, including sacks, soft winter bran, western, in 100-lb. sacks, per ton, $53@53.50; spring bran, in 100-lb. sacks, per ton; $52@52.50.

Corn.—No. 1, yellow, $1.70@1.75. Other grades quoted at the following schedule of discounts: Mixed wheat, 5c under No. 2; No. 3 wheat, 3c under No. 2; No. 4 wheat, 7c under No. 2; No. 5 wheat, 11c under No. 2. Sample according to quality.

Wheat.—New, No. 2 red winter, $2.70@$2.75; No. 2 red winter, garlicky, $2.60@2.65.

Oats.—No. 2 white, 82@83c; No. 3 white, 81@82c.

LIVESTOCK MARKETS

—Aug. 30, 1920.

LANCASTER.

Cattle—Receipts, 3,188 against 2,770 last Monday; market very active; demand for stockers and feeders brisk; prices steady; good to choice steers $14.50@15.25; medium to good, $12.50@14.50; common to medium, $9@12.50; fair to good bulls, $9.50@11; medium, $8@9.50; common, $6@8; good to choice heifers, $11.50@12.75; medium, $9.50@11.50; common, $6.50@9.50; good to choice cows, $9.50@11; medium, $7.50@$9.50; common, $5.50@7.50; canners and cutters, $3@5.50; feeding steers, best grades, $10.50@11.50; fair to good, $8.75@10.50; common to fair, $6.50@8.75; stock steers, best grades, $9@10; fair to good, $7.25@9; common, $5.50@7.25; stock bulls, best grades, $8.75@10; fair, $7.50@8.75; common, $5.50@7.50; stock heifers, best grade, $8.50@10; fair, $6.50@8.50; common, $5.50@6.50.

Calves.—Receipts 130; good to choice, $17@19; medium, $12@17; common, $6@12.

Hogs.—Receipts, 113; best grades, $16.25@17.25; light weights, $15.50@16.25; roughs, $11@12.

PITTSBURGH

Cattle.—Higher; supply 75 cars; prime, $15@15.70.

Sheep and Lambs.—Lower; supply 20 double decks; prime wethers, $8.50@9; culls and common, $2@4; lambs, $9@15; calves, good to choice, $18@19.

Hogs.—Higher; supply 40 double decks; mediums and heavy yorkers, $16.75@17; prime heavy, $15.50@15.60; light yorkers, $15.75@16.25; pigs, $15@15.50; roughs, $11@13.

CHICAGO.

Cattle.—Receipts, 23,000; choice steers strong to steady; medium, good grades, slow to 25c lower; common grassers unevenly 15c to 40c lower top, $17.75; bulk, good and choice, $15@25@17.50; grassy kind, $9@14.50; bulk, bologna bulls, $5.50@6.50; good to choice cows steady, $9.50@12.75; medium kind, $6.75@8.75; mostly 25c lower; canners steady, $4@4.75; bulk, veal calves, $15@17.25; rangers mostly steady, $8@11; choice, $15.

PHILADELPHIA DAIRY MARKET

—Aug. 28, 1920.

Butter.—The market showed no important change, and, as usual on Saturday, there was very little disposition to trade in a wholesale way. We quote: Fresh, solid-packed creamery, high-scoring goods, 59½@61½c, the latter for jobbing sales; extra 58½c; do., extra firsts, 57½c; firsts, 53@56c; seconds, 49@52c; lower grades, 45@48c; sweet creamery, choice to fancy, 69½@62½c; fair to good, 50@59½c; ladle-packed, as to quality, 44@47c; packing stock, 39@44c; fancy brands of nearby prints were jobbing at 66@69c; good to choice, 58@65c; fair, 55@57c.

Cheese.—Firmly held. We quote: New York, whole milk, current make, fancy, firsts, 28@28¼c; common to fair, 25@27c; Longhorns, 27½@28c; single Daisies, 27½@28c; jobbing sales of fancy goods, 30@31c.

INTERSTATE MILK PRICES

—Aug. 28, 1920.

August milk prices continue in force for September.

NEW YORK MILK MARKET

—Aug. 30, 1920.

Receipts show a slight increase. Local demand is not so brisk and a small surplus is reported. The September rate for 3 percent milk in 200 mile zone is $3.60 per 100 lbs.; 3.6 percent milk is $3.89 and 4 percent milk $4.05.

Receipts of milk and cream in 40-quart cans for the week ending August 28, 1920, were as follows:

Railroad	Milk	Cream
Erie	41,702	5,133
Susquehanna	6,656	93
West Shore	12,110	2,196
Lackawanna	52,022	3,105
N. Y. Central (long haul)	197,113	5,477
Ontario	41,246	1,986
Lehigh Valley	56,510	948
New Haven	6,450	65
Pennsylvania	12,114	466
Other Sources	5,000	250
Totals	430,923	19,719
Same week last year	326,112	17,331

Farm Products Prices and Prospects

RAINS HELP CORN CROP

Highly beneficial rains have fallen in parts of Kansas, Nebraska, Iowa, Illinois, and Missouri and Ohio and talk of drought from these states is less noticeable. Some sections now have sufficient moisture to carry the crop to maturity. A little damage has been done in all sections as the result of the recent dry weather, but it is hard to see how the final yield will be reduced below 3,000,000,000 bu. Losses suffered in Illinois will be more than made up by big crops in Iowa and Nebraska to say nothing of South Dakota and Minnesota, Owing to the lateness of the crop safety first dictates that sufficient seed be saved from the 1919 crop to provide strong seed for 1921 planting. Official reports indicate that there will be much soft grain this season regardless of future weather conditions. The average date of killing frost is about October 15 to 25 thru the center of the corn belt, but about once in five years it comes much earlier.

Harvesting is progressing rapidly northwest and is now general in Canada. Threshing is practically finished in many sections in the central west, and much new wheat and oats have already been moved. Receipts of wheat so far this season have been decidedly below expectations. How much this is due to the transportation situation and how much to the hold tendency on the part of producers cannot be determined, but undoubtedly the general belief among farmers that prices will ultimately be higher has induced those who can hold their grain to do so. The crest of the demand for money to move the crops has been reached apparently, and while money may not draw a lower interest rate it will be slightly easier to secure. In some sections banks will not loan freely to country elevators, but this does not seem to be general. In those cases where home banks will act loan pressure should be exerted by farmers' organizations. Cars promise to be somewhat more plentiful for a time.

An after-threshing movement of old corn which starts to arrive at terminal markets usually takes place in September. Reports from Illinois and other states indicate that producers are getting ready to sell. Daily receipts at the moment are very small, and in the case of Chicago less than the requirements of industries. The latter have been forced to withdraw corn from store and stocks have decreased rapidly. Much grain is now being moved east in order to take advantage of the old freight rate.

WHEAT VISIBLE SMALL; EXPORT LARGE

Foreign demand for cash wheat has not been active, but exporters are taking liberal quantities to apply on old sales and the market has become more steady. The big rush of winter wheat is over apparently. In parts of Texas and Oklahoma the competition between mills and exporters has resulted in the former being able to secure very limited stocks, hence the past week brought reports that mills had suddenly advance their prices 3@5c over those bid by exporters. There is plenty of wheat this season, but there is a scarcity of actual grain to fill export sales, the car situation being a factor. The visible supply is only about 20,000,000 bushels yet exports are about 30,000,000 bushels of wheat and flour per month. There is no reason why a producer cannot sell his wheat at $2 or better at any loading point in the west or southwest. Spring wheat from the new crop is commencing to move in fair volume, and the new has gone to a big discount under the old. Flour prices have dropped in sympathy with spring wheat.

If a liberal amount of cash rye could be secured there would be considerable export business in rye flour. Rye exports the past year at 37,000,000 bu. are a record. Germany and Sweden have taken considerable wheat and rye of late. Financial conditions in Europe as well as the political reports must be closely watched. It can be stated authoritatively that there is no surplus of wheat or rye in Germany this season, and liberal import will be necessary. When it is considered that a German mark is worth only 2 cents against a normal value of 23.8c the amounts of grain taken recently are surprisingly large.

OATS EXPORTS SMALL

A belief that producers would hold for higher prices resulted in a stronger undertone in oats. A little export business has been done with the continent and with Cuba, altho Argentine oats have been selling at around 85c c. i. f. Liverpool or about 20@25c under those from the United States. Our oats exports have averaged about 85,000,000 bushels during the last six years, but during the 1920-1921 season there may drop to 20 or 25,000,000 bushels.

OCEAN FREIGHT RATES DEFLATED

During the war and for a year and a half thereafter ocean freight rates were higher than the proverbial cat's back. Recently these rates have been on the toboggan and are now said to be only 30 percent as large as they were in early spring.

Such changes cut both ways so far as farmers are concerned, as they make it easier to sell wheat and pork products abroad but their benefits in this way are overshadowed by the increase in competition they bring to growers of other products. Producers of corn, beef, wool and hides in South America, and frozen lamb and wool in Australia will find it easier henceforth to compete in our markets. Since such rates are internationalized other countries exporting wheat are helped the same as the American wheat grower.

The net result to American farmers, particularly those who produce corn, beef and mutton, is a big loss of advantage. The ocean freight on corn from Argentina to our seaboard last spring was about 50 cents a bushel; now it is about 14 cents, or still practically twice as large as pre-war times. Argentina has a big crop just harvested. Just now little of it is coming to the United States, but the drop in freight rates is opening the way. Some of it sold at $1.35 delivered at New York City last week and more was offered at the same figure. Our crop is big this year, but if the crop were small Argentine competition would be a big factor in holding down the price.

ABSENCE OF SHIPPING ORDERS CHECKS HOG MARKET

The hog market continues to billow along without getting far up or down. Packers assert that hog slaughter is losing them money but are ready to purchase on all breaks. They are equally averse to bullish tactics. This was a week of short supplies also eastern points had more than usual, some of them registering sharp declines. Absence of orders at Chicago for eastern shipment prevented the market from going higher and also was responsible for bringing the bacon and packing grades closer together. Average weight is running higher than last year and old sows are coming fat, denoting that the country is willing to feed corn. The demand for feeder hogs is liberal, many buying along with feeder cattle. The downward trend which is certain to show itself in the hog market inside of six or eight weeks when the new crop of big pigs begins to show up will work against such purchasers. An early frost damaging the corn crop, would vindicate them.

PROVISION STOCKS STILL BEARISH

The official report on lard stocks in all storages show a trifling gain during July, but stocks of meats of all kinds decreased. The totals are still large. The need of Central Europe for meats and fats is still asserted and Britain is reported to have purchased 5,000,000 lbs. of hams and an equal quantity of lard recently but the latest report upon the movement overseas showed only 9,600,000 lbs., a very small figure. The decline in the British pound to $3.60 and under and the German mark to less than 2 cents is not helping the situation. Packers talk optimistically, however. Prices on fresh pork were higher early last week but receded later.

HAVE LIVE MUTTONS REACHED BOTTOM?

From an average Chicago price of above $20 in the later part of February to below $13 in August, about $5 of the loss occurring since the middle of May, is recent lamb market history. The decline has been so extreme that a reaction is in order and toward the close of last week the market steadied, inciting inquiry as to whether the slump has been arrested. The wool market has not yet revived, the frozen lamb imports are not yet consumed and more may come at any time, but wholesale lamb prices are now in line with other meats altho they declined still further last week.

In spite of the decline in the lamb market feeders are buying thin lambs and thus giving support to lower grades.

NO GOOD NEWS FROM WOOL CIRCLES

The awakening of the wool market is still postponed, the only news of consequence being that more mills have closed. The reopening of some of them during September is still forecasted. The financing of western growers is a sore point, the Federal aid plan being less generous in the amount of the advance and time to run that private banks according to some growers. However, the government's willingness to give aid probably reassured bankers. Consignees to the National Wool Warehouse, Chicago, will receive warehouse receipts good for collateral for loans at banks. Not enough business is being done anywhere to establish quotations.

HAY PRICES HIGHER

The coming freight rate increase has been especially stimulating to buyers of hay and prices have advanced. Reduction of buying as this influence passes may cause a setback altho the shortage of cars will check any decided slump from the present level. The government's report indicates a crop, both wild and tame, well above the five year average. With a decrease in numbers of live stock on farms the supply for the year looks ample.

Philadelphia.—Timothy, No. 2, $36@37; No. 3, $30@31; light mixed clover, $32@35; rye straw, $15@16.50; wheat straw, $11.50@13; oat straw, $12.50@14.

FURTHER DECLINES IN TIMOTHY AND CLOVER

The Bureau of Markets estimates timothy seed production as only 80 percent of that of last year and reports that retail sales and exports were larger than usual. Farmers seem disposed to hold for higher prices and the fall demand should help the market. Dry weather is needed in some sections to mature red clover seed. It is believed that a larger acreage than usual will be cut for seed because of the tempting price last year. The market was lower the past week. Toledo quoting cash prime red clover at $17.70 and timothy at $4.20 per bushel.

POTATO SLUMP ARRESTED

The big slump in potato prices has checked the movement to some extent and resulted in firmer prices toward the close of last week, especially at eastern points, but the new movement is still nearly up to normal. Recent rains are expected to increase the yield. Operators complain bitterly of the unsatisfactory car service. Prices were as follows: Philadelphia, Southern No. 1, $3.50@4 per bbl. No. 1, 1@2, Jersey, per ⅝ bushel basket, No. 1, 90c@$1; No. 2, 40@60c.

Humus in soils helps them to hold water. Farmers who do not keep livestock especially need to turn under cover crops, preferably legumes.

The Voice of the People

This department is reserved for use of our readers to discuss problems and matters of general farm interest. Write your views and comments briefly on any question of social, economic or educational importance and thus share them with others. Such articles should not exceed 200 or 300 words. Publication of such articles does not signify editorial endorsement or agreement.

HOW WE IMPROVED THE SOCIAL LIFE OF OUR COMMUNITY

We have had a singing school and a dancing club, but they did not seem to meet all requirements. The girls thought that something should be done to liven up the neighborhood besides the debating society, and they talked and talked, as girls sometimes will when they happen to meet, and finally one suggested a cooking club. They got quite excited over the idea and appointed a place of meeting in company with other girls that could be induced to attend. I am not one of the charter members and cannot tell exactly how they organized, but I know they formed some rules and by-laws, subject to amendment as they saw fit. They elected a president, vice president, secretary and treasurer, limited the number of girls to 14, and they must all live in the country of course. So they started with ten girls. The first year they called their club a progressive one, with a flowery name. They were to meet every two weeks in the day time from 10 until three. Folks predicted that it was too much of an aircastle to last more than a season, but we have just held our election for the Tenth year's work, with the limit of members enrolled. Of course, everything has not progressed as smoothly as we could have wished. A few refused to join, and one resigned before we were fairly started. One has gone to follow that noblest of callings, a trained nurse. In the busy summer we meet only once a month, in the afternoon to keep close connection. We have an annual picnic after harvest, held by a lake, to fish and boat, and some of the men go bathing. We always take a camera and dinner, of course. We meet beforehand and decide on the fare, then allot a share to each woman. For instance, one takes bread; another chicken, and so on, and when all is combined, we have a good repast with very little trouble. At our all day meetings, we meet in turn at each member's home until we get around the circle, and allowing for bad weather it takes us all winter.

The lady who entertains us furnishes, milk and soft drinks and spreads, and each of the others bring a dish of something already prepared, and all the hostess has to do is to set the table. Some of the men are kind enough to say our only object is eating, but we take our sewing and fancy work along, exchange patterns, and recipes, and helpful ideas. I suppose you wonder where the men come in, but I am getting to that. Not oftener than once a month one of the members entertains the club at night and the supper menu is shared by all. The hostess may invite four outside ladies, and each member invites a man who generally escorts her. One lady member cannot invite the same person twice in a season until every one has been asked. The men who have musical talents are always on the job. Sometimes we have recitations. Our first attempt was a "corn party" and table decorations, etc., were carried out to that effect. Our Grange was organized later and has now 150 members. Its hall is nicely furnished and is a cheerful, home-like place to spend an evening. Every member tries to make the evening sociable and pleasant. Our grange is a success. We have members less than 16 years old, but none are admitted but those willing to help, either in teaching or learning. The stock, etc., is usually of the members raising. Speakers local, State and National reputation discuss questions in a comfortably seated auditorium, that accomodates several hundred people. All this is the property of the farmers, not speculators. It is owned by the Grange, and conducted exclusively by a committee elected by the Grange, and represents thousands of dollars. It is not run in the interest of any one man, but it is the property of the Grange.—Mrs. C. A. U., Atlantic Co., N. J.

RED CROSS RURAL NURSING.

What It May Mean to Your Community

A resident nurse whose services are for the sick in their homes.

Instruction of prospective and young mothers, including the proper care and feeding of infants.

Physical inspection of school children and practical talks in the school and home on personal and domestic hygiene.

Prevention of the spread of tuberculosis, typhoid fever and other contagious diseases.

Organization of clubs or classes for instruction in home care of the sick, and allied subjects.

Improvement or removal of bad housing conditions, insanitary surroundings and other unfavorable conditions that menace the health of your family, your neighbor and yourself.

A stimulated public conscience and a broader effort to promote the general welfare of your community.

STANDING BEFORE KINGS

Have you ever stood before a King? I'll wager you have often wanted to and felt equally sure that you never would. I know that numbers of our countrymen, Americans, have thought so much about Kings with their crown, sceptar and royal robes that they have spent endless time and countless dollars in an effort to stand before them and be introduced. They held royalty above all and were determined to stand in its presence, breathe its atmosphere and worship at its shrine. How foolish and what a waste of time and money. Had they but known, they might have been spared their trip and stood before greater Kings than they met in all their travels. Perhaps they have learned their lesson now and are back at home daily mingling with Princes of men and Kings without crowns. Why I could name you more Kings in that small town of ours than have graced Royal Thrones since history records them. Not everybody recognizes them as Kings, and not everybody can stand before them, but they are great and real Kings.

Do you recall the saying: "Seeth thou a man diligent in his business? He shall stand before Kings; he shall not stand before mean men." If you think of it for a minute you can not believe that a man so great as to hand down this noble teaching could have had in mind mere royalty. Benjamin Franklin was a plain man, but a great King. Franklin put deeds and character above jewels and pageantry. You can be sure that he stood before Kings both crowned and uncrowned for he was great; but you can be equally sure that it was not merely to royalty that Solomn referred in pointing the way to success in life. If you wish to be great, stand before Kings and know them when you see them, make a study of the lives of great men. It is there that you will find the rudiments of success and the key to happiness—contentment.—W. E. D.

THE FARMER

Give me that man close to the soil,
Who thru the dragging years of toil,
Against grim famine proves a foil.

Who rises in the dawn's half light,
Reluctant morns that edge from
night;
Poised for the ancient manly fight.

Whose stalwart silent figure stands,
A bulwark for the crowded lands,
A nation's future in his hands.

—Thomas J. Murray,
6431 P[illegible]

TRACTOR SAVES WORK OF MAN AND TEAM

James G. Herr, York Co., Pa.

I have had a tractor for more than three years. I have a farm of 141 acres of which all can be plowed with the tractor. I always had to keep two men besides myself and six head of horses and mules. I decided I would try the tractor, so I bought a 10-20, a three gang 14 ft. bottom plow and then sold one pair of mules and only kept one man besides myself. The first spring I did my plowing for 23 cents per acre, the second season 28 cents per acre and the third season 26 cents per acre.

I plowed on an average of 8 acres a day where it required 4 men and eight horses to do the same work. At the same time my man was doing other work such as hauling manure and putting on the fertilizer.

I do the harrowing and rolling at the same operation. This saves one man and team I also do my own threshing, hauling and grinding feed at a very low cost. I haul my grain to the barn and use horses to cut the wheat as I have a six foot binder.

I have plowed more than three hundred acres in three years and I have time to plow for my neighbors. Now I have told the uses of the tractor so I want to tell you something of the care of one to have it in shape. One wants to know something of gas motors and be able to clean and adjust valves as well as to know the electric system. My engine has never cost me anything for repairs but a new set of points for magnetos.

(Note.—The figures given evidently refer to the cost of gasoline and oil. The Editors.)

MY TRUCK IS A SOURCE OF PROFIT AND COMFORT

By F. G. Payne, Bradford Co., Pa.

Located as I am nine miles from the best market in Bradford County, my truck has been a source of profit and comfort to me and my family. We not only use it for our trucking purposes but use it as a passenger car, and where you can afford only one we get along with it very nicely.

We have made several trips to the nearest city curb market 30 miles distant, and I consider each trip profitable.

The profitable and economical part is in making trips quicker than with horses, but it also saves feed and horse-shoeing, also wagon repairs and every farmer knows it costs to shoe and feed horses for road work.

The motor truck would be a much more economical investment in handling the farm produce if the rural roads could be improved so it could be used more days in the late fall and early winter months. We have made several trips with our truck to get farm supplies and such other tools as we needed and got them quickly. This, too, was a saving as compared with slow freight transportation and high freight rates and then we did not have to drive a team several miles to the freight station.

My son who drives the truck not only has his pleasure with it but he does a good many odd jobs which brings him in some revenue for his work and all together we consider it one of our best investments.

Another reason why the pressure cooker is a money saver: By [illegible] cheaper foods may be made [illegible]

WEAR LIKE A PIGS NOSE
ASK YOUR DEALER
(71)

FINCK'S DETROIT SPECIAL OVERALLS

There is a guaranteed standard of perfection in Finck's Overalls—a standard of ***Wear, Fit, Comfort, Convenience*** that you will find in no other garment.

Finck's Overalls fit comfortably even after washing because they are made extra size and correctly designed.

Finck's Overalls wear because there is little or no strain. They will not bind. They stand all strains no matter what position the wearer works in.

Finck's last, true to their slogan, "wear like a pig's nose," because only the very best quality of denims is used. This plus careful construction in every detail means the longest service and lower cost in the long run.

Let your dealer fit you to Finck's.
If he cannot supply you, write to us.

W. M. FINCK & COMPANY
DETROIT, MICHIGAN

Manufacturers of

High Grade Overalls, Men's and Women's Combination Work Suits

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Seattle, Wash
Chattanooga, Tenn.
Livingston, Mont.

LIFE TENANT PAYING MORTGAGE

By A. B. BROWN

If land is willed or deeded to A to hold for his life and then the entire ownership to go to B, as is often done, A is called the life tenant and B the remainder man, and in connection with such arrangement some important legal questions arise.

For instance, take the case of farmer John Brown who owned a valuable farm and mortgaged it for $5000. Later on he made his will leaving the farm to his widow "for the term of her natural life," to use the legal phrase, and after her death to go to his son Henry. Then Brown died and the widow, as life tenant took possession of the land and, of course, was entitled to hold it as long as she lived, when it would go to Henry the remainderman.

Henry was a rather shiftless chap, however, and made no effort to get on in the world, but anxiously look-ahead to the day when the widow would pass out and the farm would be his.

John Brown had not paid the mortgage mentioned in his lifetime, and it fell due while the widow was still living on the property. On the due date the holder of the mortgage called on her and demanded the principal and interest.

"I'm not the real owner of this farm," the widow explained, "as I only hold it for my life. Henry comes in then and it's for him to pay the mortgage."

"But you're living on the farm just now," maintained the other.

'But I might die tomorrow, when the farm would be his, so if I paid the mortgage today I would be paying it for Henry's benefit," the widow argued, "so it certainly seems to me that he is the one to pay the mortgage."

'Do you suppose he's got $5 to his name if he had it all together?" queried the mortgagor.

The widow admitted that she thought that would be about the amount which Henry could raise on short notice.

"Now, I'll not waste any time going to him at all, and if you say you won't pay the mortgage I'll start foreclosure proceedings tomorrow," declared the mortgagor.

The widow was in good health, and altho she had suggested the possibility of a sudden death, she did not really believe in it herself, and, knowing that there was no way to save the property except by paying the mortgage, she gave the mortgagor a check in full for the principal and interest.

The next week the widow met Henry in town, and told him what she had done.

"It was very kind of you, and I'm much obliged," was his sneering reply.

"But when I paid it I simply paid it to save the place from foreclosure and that was more for your benefit than mine," said the widow, "and, as you will be the absolute owner after my death, you are the proper party to pay the mortgage. Probably it would be right for me to pay the interest, but you certainly should pay the principal of the mortgage on your own property."

"When you see me paying out any money on land that you're getting the benefit of you'll know it," Henry declared.

"I surely ought to have some claim on the land for the money that I paid," suggested the widow.

"You can hold any claim you like, for all I care," Henry growled as he walked off.

After thinking the matter over the widow decided that she might have made a mistake in paying the money, and that she might have no claim on the land or for the amount, so before leaving for home she consulted a lawyer in regard to the matter.

You are quite safe," the latter told her, "as the general rule which has been laid down by the American Courts is that a life tenant who pays off a mortgage on the property is entitled to a lien on the interest of the remainderman for the amount of the mortgage, or to stand in the shoes of the holder of the mortgage as against the interest of the remainderman in the land, which effectually protects the life tenant in either case.

"If a mortgage charge is paid off by a tenant for life, the lawyer read from a book which he took from the shelf, 'without any expression of his intention, it is well established that he retains the benefit of it against the remainderman. Altho he has not declared his intention was to keep it alive, because it is manifestly for his benefit."

RURAL DWELLERS AND THE BOOK WAGON

Books to every rural dweller is one of the main objects of the Enlarged Program of the American Library Association, which aims with the aid of existing library agencies, to promote library facilities to 60,000,000 persons in the United States now without ready access to good books. A fund of $2,000,000 is being raised to carry out this project thru the personal efforts of 4,000 librarians, members of the organization, library trustees and friends of libraries. The movement will extend over a period of three years.

Extension of the county library system is purposed to bring books to those in country districts. Circulation of books among these people is carried on by the book wagon, which has come to be recognized as an extremely desirable unit of the system.

The book wagon now is used in but few of the states which have operative county library laws. It is a library on wheels, completely equipped with useful and entertaining books. It circulates from the administrative library of a county among that portion of a county's population without adequate library service. It makes its trips at definitely set periods, which vary according to the size of its parish. There is often a librarian in addition to the driver. One is thoroly acquainted with the book wagon's patrons and their needs, the other is familiar with its territory. This maximum of library service is rendered rural dwellers without charge other than a small tax which the county levies for the maintenance of the county system. This often is not more than one mill on each dollar on assessable property. The book wagon is the most efficient agency for providing for the book needs of a rural people.

TO ESTIMATE CONTENTS OF SILO

A simple way to estimate the amount of silage left in the silo, as many farmers want to do at times, is outlined by the New York State College of Agriculture, which points out, however, that no great accuracy is possible because variations may result from a number of causes.

To make the estimate, the farmer needs to know the cubic contents of the silage in the silo. He must first find the floor area. In the case of a square silo this is obtained by multiplying the two sides. In the case of a circular silo, the area is found by multiplying one-half of the diameter by one-half of the diameter and then by 3.1416.. The cubic contents of the silage is this figure times the height of the silage in feet.

Assuming that the silage is well settled and of average water and grain content, reasonably accurate weights can be assumed for one cubic foot of silage at different depths. With these weights, it is easy to figure the tonnage in a full silo, or one from which any part has been removed.

Under such conditions, the first foot of silage at the top of the silo may be estimated as weighing about 32 pounds a cubic foot. For each additional foot in depth up to 10 feet six tenths of a pound to the foot should be added. For each additional foot from 10 to 20 feet three-tenths of a pound to the foot should be added. For each additional foot from 20 to 30 feet, two-tenths of a pound to the cubic foot should be added. After 30 feet, one-tenth of a pound a cubic foot is the approximate increase in weight.

It has been found that unusually high grain or water content may increase the approximate weights by from one to 20 percent and a low grain or water content may decrease the weights similarily.

TRUCK MAKES QUICK MARKETING POSSIBLE

By Chas. Brower, Jr., Monmouth, Co., N. J.

For the benefit of fellow readers I will say that my truck has paid for itself, several times. Living as I do, several miles from a station I would be lost without it during the rush season. It saved me several hundred dollars during the last season by enabling me to get my potatoes on the market before the prices fell. If I had depended on my horses I should have had a fourth of my crop yet in the ground when the drop came.

Instead of, as I formerly did, taking a whole day to deliver a load of hay, I find I can do it in a few hours with my truck and consequently have the remainder of the day for farm work. It is also a time saver for carting seed, fertilizer, etc. Furthermore it works all year round. In the winter I use it for carting ice for myself and neighbors. In this way, while running no board bill itself, it helps pay for the horses feed. In short it does the work faster, cheaper and better than horses and eats only when it works. I find my truck not only economical but indispensable.

FERTILIZER EFFECTIVE IN GROWING CORN CROP

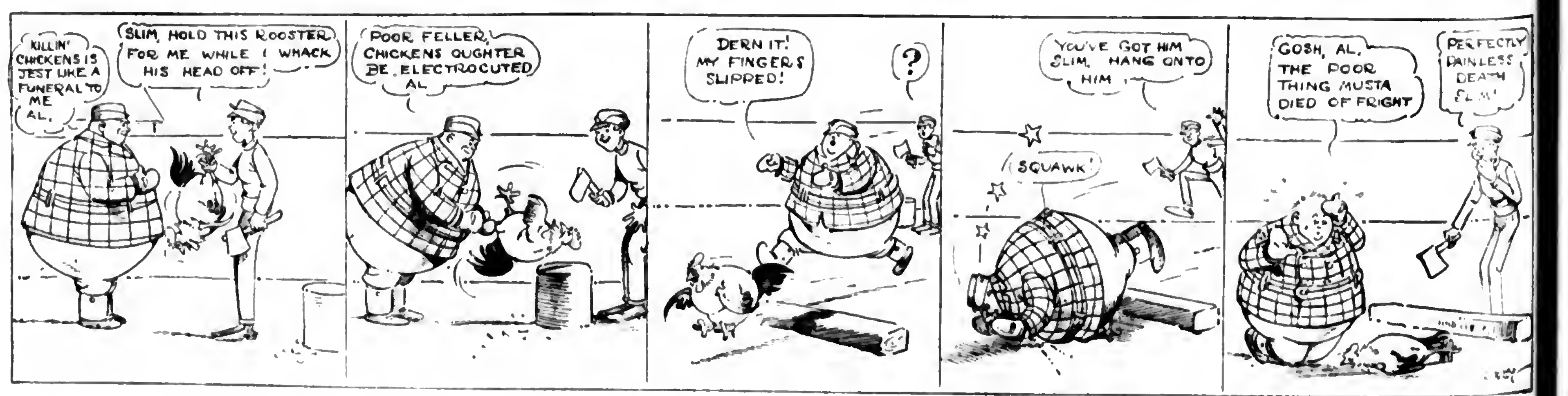
Acid phosphate is one of the most effective fertilizers for increasing the corn crop at a relatively low cost as found by experiments at the Ohio Experiment Station. This fertilizer gives its best results when used with manure and also, on acid soils, after the land has been treated with limestone, at the rate of 2 tons of ground limestone to the acre.

Some prejudice has been held against acid phosphate because it was believed that this fertilizer would ruin good soil, but experiments have disproved this fact.

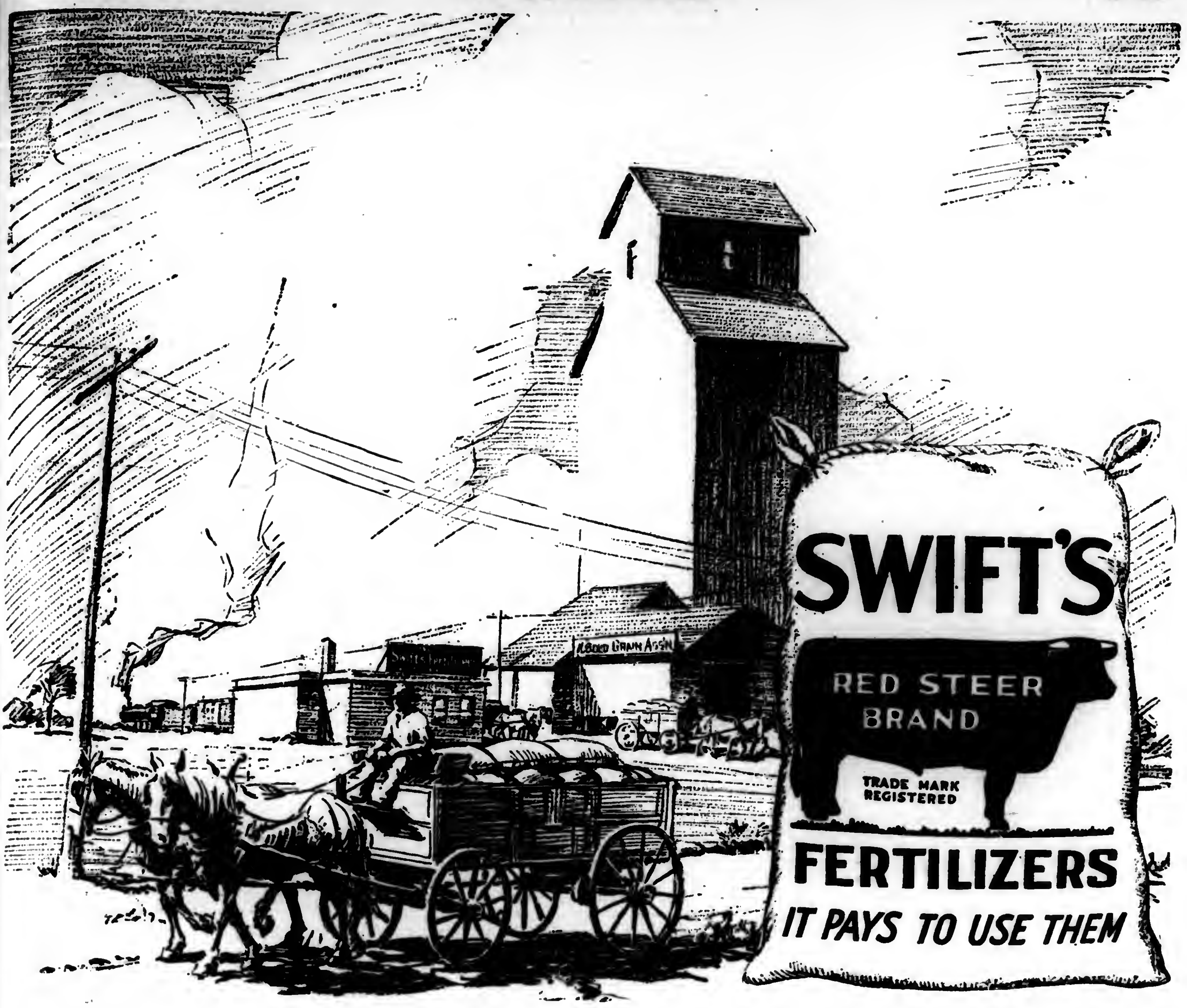
When acid phosphate has been applied to land at the rate of 300 pounds per acre, and 8 tons of manure applied in addition, the yield of corn at the Ohio Station for the first 10 years of the 20-year period was 62 bushels; for the second 10 years it has been 70 bushels, while the unmanured yield has averaged only 36 bushels for the entire period.

Acid phosphate this year costs farmers about $30 a ton but even at this price it is more economical as a fertilizer than the raw rock phosphate.

Don't throw away the tender tops from the beets. Beets geens are [illegible]


KILLIN' CHICKENS IS JEST LIKE A FUNERAL TO ME AL,
SLIM, HOLD THIS ROOSTER FOR ME WHILE I WHACK HIS HEAD OFF!
POOR FELLER, CHICKENS OUGHTER BE ELECTROCUTED AL
DERN IT! MY FINGERS SLIPPED!
?
YOU'VE GOT HIM SLIM, HANG ONTO HIM
SQUAWK!
GOSH, AL, THE POOR THING MUSTA DIED OF FRIGHT
PERFECTLY PAINLESS DEATH

Slim is So Tender Hearted That He Hates to Assist in Killing Even a Chicken. Nevertheless, the Chicken Was Killed



There's still time to fertilize

SWIFT'S Red Steer Fertilizers are manufactured in 24 factories equipped with the most modern machinery.

One or more of these factories is located at an advantageous railroad shipping point near you—ready to give you prompt service.

If you haven't invested in Swift's Red Steer Fertilizer or if you want to make the application per acre heavier, now is the time to place your order.

Remember that one acre fertilized is generally good for more profit than two acres without fertilizer. And it's the heavy application that pays the farmer the biggest profit.

Get the most plant food for your money by buying Swift's Red Steer Fertilizers containing 14% or more plant food.

Don't wait. Place your order with our local dealer now or write our nearest sales division.

Swift & Company, Dept. 18
Fertilizer Works
Baltimore, Md. Cleveland, O.

Brands specially recommended

We recommend the brands given below as the most profitable to use under general farming conditions.

	Analysis Ammonia	Phosphoric Acid	Potash
Swift's Champion Wheat & Corn Grower	2	12	2
Swift's High Grade Acid Phosphate Fertilizer	0	16	0
Swift's 10-4 Fertilizer	0	10	4
Swift's Clay Soil Special	2	12	0

AMMONIA gives the plant a quick start, particularly necessary when seeding is delayed to combat the fly, increases vegetative growth, and aids in stooling.

PHOSPHORIC ACID increases root growth, aids in stooling, plumps the berry and hastens maturity.

POTASH stiffens the straw and aids in starch formation.

Select from the above list the brand best suited to your requirements. Other brands on request.

REMEMBER—The higher the analysis, the cheaper the plant food per pound.

Swift & Company

"IT PAYS TO USE THEM"

GENUINE ASPIRIN

Name "Bayer" identifies genuine Aspirin introduced to physicians in 1900. Insist on unbroken packages of

BAYER-TABLETS of ASPIRIN

Aspirin is the trade mark of Bayer Manufacture of Monoaceticacidester of Salicylicacid

Wonderful Cow Tonic

How About Your Cow? Off her Feed? Not Producing the milk she should? Try our wonderful cow Tonic— More-Milk—Absolutely Pure and Harmless—Free from filler. — every ounce of ingredient having ACTIVE Medicinal properties; given as directed will increase the flow of Milk—No Dairy should be without it—WORKS WONDERS AFTER CALVING—Order a standard size box for trial today, $1.50. MORE-MILK MEANS MORE MONEY to you Mr. Dairyman.

Compounded and Sold by
Paterson Veterinary RemedyCo.
606 River St., Paterson, N. J.

Buy a Farm Tractor

Farm Tractors for sale—All makes—some new, exhibited at Fairs; others little used at demonstrations—guaranteed. Lowest cash prices, or on installments. Write for tractor and engine bulletin.
FARMERS' EQUIPMENT CO., Jersey Shore, Pa.

Poultry

Look! $14 BABY CHICKS a 100 up!
By insured parcel post, postage paid. 40 breeds chicks, 4 breeds ducks. Get August and September chicks for February and March layers. Catalog free, stamps appreciated.
NABOB HATCHERIES, GAMBIER, OHIO.

LIVE POULTRY
Hay and all farm products wanted. Daily demand at good prices. GIBBS & BRO., 325 North Front St., Philadelphia, Pa. Estd. in 1844.

EGGS Etc.—Small consignments from producers in your territory bring very attractive prices NOW. Prompt returns always. Refer to Dun or Bradstreet. Ship us your next case. ZENITH BUTTER & EGG CO., 170 Duane St., New York, N. Y.

Crystal Spring Poultry Farm
Offers at least 500 extra fine cockerels, from 16 to 24 weeks old; also B. P. Rocks, R. I. Reds, W. Leghorns and Bl. Minorcas, at $2 and $2.50 ea. Satisfaction guaranteed. M. E. Basehoar, Littlestown, Pa.

Sicilian Buttercups
Farm range, prize winning Buttercups. Investigate this wonderful variety. Write for circular.
MAPLE LAWN FARMS, CORTLAND, N. Y.

TIFFANY'S SUPERIOR DUCKS
Mammoth Pekin, Giant Rouen, and Indian Runner Ducks and Drakes, $2.50 each and up.
Aldham Poultry Farm, R 37, Phoenixville, Pa.

LEGHORN COCKERELS From Barron 300 egg strain, pedigreed White Leghorn cockerels, 16 weeks old; to be delivered in Sept. Satisfaction guar't'd. Prices, No. 1, $5; No. 2, $3.50. L. C. Beam, E. Mauch Chunk, Pa.

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
SELBY PRODUCE CO., PHILADELPHIA

LEGHORN COCKERELS 4 months old S. C. White Leghorn Cockerels. Sons of hens with records of 230-267 eggs. Trap-nested 9 years. Paul Clark, R. No. 2, Sunbury, Pa.

S. C. White LEGHORN COCKERELS, 4 mos. old, $2.50 each prepaid. Good chance to improve your flock. MRS. C. E. STUBY, BUFFALO MILLS, PA., R. 1.

Silver Spangled HAMBURG COCKERELS, 14 weeks old, $3.00 each. PERLEY W. LAWTON, Tiadaghton, R. I, Pa.

A NOTABLE PICNIC

One of the livest and most important gatherings of farmers held in Pennsylvania this year occurred at Lenape Park, Chester County, on August 23. The immediate cause of the gathering was the organization of a County Livestock Association which was promoted by the Pomona Grange, the Farm Bureau and the Milk Association. The purpose of the association is to encourage the breeding of purebred livestock of all kinds. A constitution and by-laws were adopted and the following elected as officers: President, Morris T. Phillips, Pomeroy; vice-president, E. Dale Andrews, West Chester; secretary, Albert W. Hoopes, and treasurer, Roland Smedley, both of West Chester.

An Advisory Committee was appointed, consisting of two members to represent each of the following lines of livestock; Holsteins, Jerseys, Guernseys, Ayrshires, Beef Cattle, Berkshire swine, Chester Whites, Duroc-Jerseys, Poland Chinas, Hampshires, Sheep, Poultry, Heavy Draft Horses, and Trotting Horses.

Prof. R. R. Welsh of State College advocated the organization of bull clubs as a practical way to aid in reaching the aims of the new organization.

In addition to a large number of prominent local men present, there were a number of prominent visitors who spoke to the large and appreciative audience. Among them were U. S. Secretary of Agriculture, E. T. Meredith, Penna. Secretary of Agriculture, Frederik Rasmussen, Hugh Van Pelt of Iowa, John A. McSparran, Master of Pennsylvania State Grange, and others.

By this step, Chester County has set an example that should be followed by every county in which the production of livestock is an important industry. By the creation of special business organizations farmers may have the simplest and most efficient means of developing and controling their own business—both in production and in selling their products.

FEED HOGS BARLEY IF CORN IS SCARCE

Barley is an efficient feed for hogs when fed with tankage and is almost equal to corn in fattening them for market. A recent feeding trial with six lots of eight hogs each showed that barley was more than 90 per cent as efficient as corn in feeding. Barley was found also to produce a good firm quality of pork.

At the N. Y. State College of Agriculture two lots of hogs were fed corn and tankage, two lots barley and tankage, and two lots corn, barley and tankage. For three of the lots the feed was mixed before being put into the feeder, and in the other three the hogs were given their choice of feed available. The hogs allowed to follow their appetites ate an excessive amount of tankage, but the combinations of corn, barley and tankage, gave excellent feeding values.

When barley is cheaper by the hundred than corn, the cost of gain in weight may be kept down by forcing the hogs to eat more barley by mixing it with the corn and tankage. The barley preferably should be medium or coarse ground not fine; if it is not ground, it should be rolled or soaked; and if it is soaked, it should be fed only while fresh.

The lot which made the greatest daily gain in weight received a mixed ration of 46 parts corn, 46 pounds barley, and 8 parts tankage.

LIVESTOCK AT TRENTON FAIR

"The Trenton Inter-State Fair, September 27, 28, 29, 30 and October 1, has added a classification for beef cattle this year. The following is a program of judging:

Tuesday, September 28. — Beef Shorthorns, judged by W. C. Rosenberger, Tiffin, Ohio. Berkshire hogs by Prof. W. H. Tomhave, State College, Pa. Middle-wool breeds of sheep, Arthur Danks, Allamuchy, N. J.

Wednesday, September 29.—Hereford Cattle by Prof. H. L. Garrigus, Stoves, Conn. Duroc - Jersey hogs, Prof. W. H. Tomhave, Middle-wool breeds of sheep, Arthur Danks.

Thursday, September 30.—Aberdeen Angus Cattle, W. C. Rosenberger, Poland-China, Chester Whites and Hampshire hogs by C. E. Veak, Canandaigua, N. Y. Fine wool breeds of sheep by Wm. C. Skelley, New Brunswick, N. J.

Entries close Saturday, September 18th. Premium list and entry blanks will be mailed from Secretary Margerum's office, Trenton, N. J.

SIRE AND DAM RATIOS

Developments in the "Better Sires—Better Stock" campaign have resulted in figures showing the relative number of males and females kept for breeding purposes. Following are the ratios based on more than 200,000 head of stock of all kinds listed with the United States Department of Agriculture:

Cattle—1 bull to 18.9 cows.
Horses—1 stallion to 16.9 mares.
Swine—1 boar to 11.5 sows.
Sheep—1 ram to 37 ewes.
Goats—1 buck to 26.6 does.
Poultry—1 rooster to 23.3 hens.

Other poultry, geese, ducks, turkeys, etc., (average) 1 male to 8.5 females.

These figures represent conditions on more than 2,000 farms in various parts of the county and are believed to be typical of other farms. They show the importance of placing stress on quality in sires, since in practically all cases a sire is the parent of a very much larger number of offspring than the average female animal.

A chicken that looks at the end of its nose should be discounted 24 eggs a year in estimating. Cross-eyes are often the result of too close in-breeding.

A little care, a little thought, and a little extra work, and America's forests may be made self-perpetuating; but they must have more than stumps to start with.

Over $17,000 in Prizes for Milk and Butter Production

Over seventeen thousand dollars in prize money for milk and butterfat production, was distributed among breeders of registered Holstein-Friesian cattle during the year ended April 30, 1919. The official supervision, by the Advanced Registry Office of The Holstein-Friesian Association, of all regularly conducted tests, and the award of liberal prize money have proven a mighty stimulus and an educational factor of great value, in the promotion of interest and progress in the breeding of Holstein cattle.

Our booklets tell the whole story of Holstein progress.

THE HOLSTEIN-FRIESIAN ASSOCIATION
218 Hudson Street
Brattleboro, Vermont

One Carload
22 Registered Holstein Females

Twelve Milk Cows, four with A. R. O. records; eight are bred to Dutchland Creamelle Denver Lad, 162750, who is of Creamelle Vale and Pontiac Korndyke breeding; five 2-year-old heifers, four of which are bred; one yearling heifer; four heifers, 5 and 6 months old. Thirteen youngest individuals are granddaughters of $50,000 bull, King Segis Pontiac Alcartra. Price $3000 cash. Come and look them over. The lot will please you. Railroad station, Williamsport.

WEST BRANCH FARM, Linden, Pa.

CONSIGNMENT SALE

of Registered and A. R. O. Holstein Friesian Cattle, at the HORNLESS HOLSTEIN FARMS, CLARKS SUMMIT, PENNA., 10 miles north of SCRANTON, PENNA., on the D. L. & W. Railroad and the Northern Electric Railway. ABOUT 100 HEAD. MANY of them are sired by the BEST DAMMED BULL of the breed, a son of the WORLD'S RECORD SENIOR 4 YEAR OLD, KEYSTONE BEAUTY PLUM JOHANNA, with 25,787.5 lbs. of milk, 1294.7 lbs. of butter, strictly official in a year, 4% IN LONG TIME TEST. Daughters of cows with semi-official records from 600 lbs. of fat and up; sons of 30 lb. cows; son of a cow with 1050 lbs. in semi-official test. 25 animals from a herd under Federal Supervision. Many of the animals sold on a 60 day retest.

We have on hand a number of bulls and bull calves at private sale before October 1st. NATURALLY HORNLESS.—Geo. E. Stevenson, Clarks Summit, Pa.

Registered and Grade Holsteins
Get busy you calf club promoters. I have 50 registered heifer calves, 3 to 10 months old, $100 each for the lot, choice $125.00. 200 registered and high grade cows, heifers and bulls. Car of any age that you want. ¾-Holstein heifer calves, $20 each. Express paid in lots of 5. J. C. Reagan, Tully, N. Y.

MAPLE LAWN HOLSTEINS

High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.
C. W. Ellis, Jr., Maple Lawn Farms, Cortland, N. Y.

BULL CALVES at BARGAIN PRICES
We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred, healthy bulls from a clean, Tuberculin Tested Herd at reasonable prices. King of the May—Dolly Dimple—Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees.
WAWA DAIRY FARMS, 22 S. 32nd St., Phila., Pa.

STEVENS' HOLSTEIN FARM OF CORTLAND, N. Y.
King Korndyke Sadie Vale Jr., No. 20391, two nearest dams averaging 36 pounds of butter in 7 days, heads my herd. Butter records from 17 pounds two-year-olds to 34 pounds at full age. Also high grade Holstein calves, either sex, $20.00 each. Write your wants. PAUL H. STEVENS, Prop.

Miscellaneous

HOUNDS
Fox, Coon, Skunk, and Rabbit Hounds; also puppies and started dogs. Buy now and know your dog when the season opens. Stamp for reply.
H. C. LYTLE, Fredericksburg, O.

Registered Yearling Shropshire Rams For Sale
Chesterbrook Farm, Berwyn, Pa.

DARK GREY PERCHERON STALLION
Harcourt II. Recorded by the Percheron Society of America, record No. 111088, foaled July 10, 1915. Bred and owned by Lonzo McLain & Sons, Lima, O. Must be sold at once. For further particulars, apply, Fred Miller, R No. 1, Fennsburg, Pa.

Reg. Holstein Bulls from calves to serviceable age. Herd tuberculin tested under Federal and State supervision. BONNYMEADS Farms, Harrisburg, Pa. R. I

Reg. Holstein Bull Calves, from officially tested dams and a 30-lb. sire. Write for prices, pictures and pedigrees. Walter M. CRUTTENDEN, Forty Fort, Pa.

LANCASTER COUNTY HAMPSHIRE SWINE
Choice breeding stock, all ages. The best of breeding and out-standing individuality. Price of spring pigs not akin. Thirty-six prominent Eastern herds to select from. We ship only the very best quality registered stock. Prices right and satisfaction guaranteed. State your wants when inquiring.
The Lancaster County Hampshire Swine Breeders Co-operative Association. Address—
S. R. ZUG, Secretary, LAMPETER, PA.

PATHFINDER'S RIPPER
By PATHFINDER
dam by Great Sensation, heads our Duroc herd. Line bred Pathfinder offering of 40 head at Public Auction Dec. 2nd. Get a catalog.
SLATY RIDGE FARM, Palmyra, Pa. Box 5.

FASHION HERD OF POLAND CHINAS
10 young sows, bred to Fashion Giant, to farrow September litters. Spring and service boars. For catalog and price-list address
C. S. EPPLEY, ZANESVILLE, OHIO

REGISTERED DUROC-JERSEY PIGS
$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs.
C. W. Ellis, Jr., Maple Lawn Farm, Cortland, N. Y.

HAMPSHIRES
All ages. Strong and vigorous stock. When you buy you want the best, don't you? Then write us. Inspection invited. ROSS B. WITMER, LAMPETER, PA. Member Lanc. Hampshire Breeders' Co-operative Association.

REGISTERED O. I. C.'S
All ages. Bargains in bred gilts and boars of all ages. We are overstocked and the price is right.
ELM GROVE STOCK FARM,
Cortland, N. Y.

EDGEWOOD HAMPSHIRES
Everything sold. Booking orders for gilts bred for fall farrow, and pigs for Pig Club work only.
DEPEW HEAD, MARION, OHIO

Large Type Reg. Berkshires of all ages for sale. Select a breeder from a large litter. Pay when you see stock. No cash in advance.
DAVID WIANT, HUNTINGTON MILLS, PA.

HAMPSHIRES
Bred gilts, bred sows, and 2 months pigs, not akin. Free circular. LOCUST LAWN FARM, Box 2 Bird-in-Hand, Lancaster Co., Pa.

REG. DUROCS. Several Sows and service boars for sale. Also good spring boars. Good type and breeding. Northumberland Co. Duroc-Jersey Breeders' Assn., J. M. Fry, Corresponding Secy., Sunbury, Pa.

FOWLER'S PURE BRED HAMPSHIRES
Will please you.
Best and largest herd in East.
THE FOWLER FARMS, MACUNGIE, PA.

Try Reg. Big Type Spotted Poland Chinas The hog of the hour. Write for prices. Satisfaction guaranteed or money refunded.
G. CLYDE THOMPSON, Chambersburg, Pa., R. 10.

Hampshires Boars, gilts, bred gilts, and 8 and 10-week-old pigs. Send for price list on Sept. sales. Satisfaction guaranteed.
F. W. FOGELSANGER, Chambersburg, Pa.

TARRYMOOR BERKSHIRES
Quality Growthiness Prolificacy
We guarantee satisfaction.
Robt. E. Atkinson, Wrightstown, Pa. Bell Phone.

HEAD YOUR BERKSHIRE HERD with a son of Highwood Majestic. I have five left from spring farrow. Write for prices and pedigrees. MARVIN BEACH, Franklin, N. Y.

O. I. C. PIGS 8 weeks old, registered free, to be delivered in September. [illegible] Silver's strain. Satisfaction guaranteed.
THE OAKS DAIRY FARM, WYALUSING, PA.

Special Sale REGISTERED DUROC SOWS bred for Summer farrow $50.00 each, registered and express paid.
BELROSE FARMS, RICHFORD, N. Y.

Reg. Berskshires with size and quality; long bodies, good in back and legs. Spring pigs and bred sows.
NEARBY STOCK FARM, POTTSGROVE, PA.

REG. LARGE ENGLISH YORKSHIRES. Short nose, good length, prolific and quick-growing type, fall pigs for sale. J. Homer Reams, Luthersburg, Pa.

Nelson's Berkshires 4 months old pigs $25. With size and quality; guar'd to please. W. D. Nelson, Jr., Marshallton, Del.

Hampshire Hogs, bred sows, and 8 and 10 weeks old pigs.
A. H. FUNSTON, WILLOW HILL, PA.

Chester Whites Boars and Sow Pigs. Bred Sows. Collie dogs.
ARCADIA FARM, BOX D, BALLY, PA.

Big Type Poland Chinas All ages. Write your wants.
KEYSOR & CLELAND, GREENWICH, OHIO

CHESTER WHITE PIGS.—A fine lot now ready to ship, either singly or in pairs.
R. L. MUNCE, Canonsburg, Pa.

REG. BIG TYPE POLAND CHINA PIGS Hampshire Down Sheep, all from the best blood and priced right. C. E. SECHLER, MARKLETON, PA.

O. I. C. Males 2 to 4 months old. Satisfaction guaranteed.
BRUBAKER BROS., Star R, Cocolamus, Pa.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, Center Valley, Pa.

CHESTER WHITES For Sale. Service boars and young pigs, all ages.
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Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Chronic Cough.—Have a horse, used principally for driving, which has a bad cough, but has no nasal discharge. It seems to me he coughs about half of the time and when he has these coughing spells, holds head down. C. S. D., Rockville, Md. Rub throat with camphorated oil daily, give six drams of Glyco-Heroin (Smith) 3 times a day.

Unthrifty Horse.—I have a horse that is well along in years, seemingly unable to eat hay as well as he should. Had his teeth filed by our local veterinary surgeon, but it made no difference. He is very thin, must be weak for he prefers to lie down much of his time. J. F. C., Altoona, Pa.—He is perhaps an old horse with teeth which are imperfect and about worn out. Feed cut hay, ground grain and give him 3 drams of Fowler's Solution at a dose in feed or in drinking water 3 times a day. Are you sure that all of his teeth are sound?

Bowed-Tendon.—We have a five-year-old horse that has what horsemen call bowed-tendon but it is causing no lameness. Have only owned the horse two weeks and thought if treatment will benefit him much, would be glad to doctor him up. He is used for road driving to a buggy. H. I. B., Manheim, Pa.—All things considered, you had better leave the leg alone until such time as it may weaken and cause lameness.

Rupture.—I have a filly 7 months old that has a rupture about the size of a duck egg, situated about 8 inches in front of udder. What are the chances of it going away, if not treated? B. F. M., Indian Falls, N. Y.—Doubtless the hernia is not doing any particular harm or growing larger, this being the case, why don't you leave her alone until November, when if no better, then have your veterinarian operate. Painting the bunch with tincture of iodine once a day is considered good practice.

Sweeney.—My 6-year-old mare went lame in left fore leg some 8 weeks ago. I applied liniment, rested her and she got over the lameness. Now she shows a shrinkage in the muscles. What can be done to fill out the shoulder? M. J., Plymouth, N. Y.—With a hypodermic needle inject a few drops of tincture of iodine under the skin 3 or 4 inches apart. Repeat the treatment in 20 days. I might say this is work for the qualified veterinarian or physician, but it is not difficult to do it.

Blood in Milk.—I have two heifers that give bloody milk, one gives it from both fore-quarters the other from one fore-quarter. A. H., Wakefield, Md.—Try bathing the udder with cold water 3 times a day, especially the fore part. Gentle milking is very often a remedy, as rough milking is a very common cause of cows giving bloody milk. Give a teaspoonful of dried powdered sulphate of iron and a dessert spoonful of salt at dose in feed daily.

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PENNSYLVANIA FARMER

AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY

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75 Cents per Year

Argentina--A Possible Competitor

What a visit to an Estancia or Cattle Ranch in the Alfalfa District Reveals---Glenn B. Snapp

San Juan is a typical Argentine "Estancia" or ranch in the alfalfa district—typical in size, management, quality of its cattle, and in the bountifulness with which the grass grows on its paddocks.

There are in San Juan six and one-quarter leagues of land. A league of land is approximately 6,000 acres. The estancia is fifteen miles long and a little over three miles wide. Figured accurately, it covers 38,594 acres. There are at present 20,000 Hereford cattle on the estancia, 2,000 Shorthorn cattle, or a little less, with 14,000 sheep, 1,800 horses, and 500 hogs. One half of the land is in alfalfa, and a few hundred hectares, or about a half-thousand acres, is planted to corn, and the rest is in "natural" grass.

Upon arrival, the "mayordomo" or manager Mr. Tasch meets us at the station and in an hour's driving, we reach San Juan, known over Argentina as one of its better Hereford estancias. In this one sense in its Herefords, San Juan is not typical of Argentine estancias, for the ratio of Herefords to Shorthorns in Argentina, if we judge from importations, is as one to 25. In reality it is probably about 1 to 100. First we visit the "cabana," or the barn and yards where the purebred animals are receiving special care as producers of foundation stock, or being fitted for the Palermo Show in September. San Juan has won many premiums at Palermo. This Palermo show, let us put down in candor, is not excelled from the standpoint of quality by our international at Chicago, and there can be no doubt that it is the greatest Shorthorn show in the world. You can think of the Herefords which we see at San Juan then as equal in quality to the best Herefords of the United States, or England. And that is just what we see. The only deficiency with respect to such Herefords as these in Argentina is that there is not enough of them. Argentina must import many more Herefords in the next decade, not only because the local herds are few in number, but because the Herefords are rapidly growing in popularity.

It is night now, so we drive for home. The big estancia house is fitted with every sort of convenience, and even luxury, after the style of an old English estate. The steps descending the porch are of marble, the halls within, with their paintings, their rich rugs, their great high doors and ceilings denote splendor. The house is electrically lighted, has hot and cold water, under pressure, and an insulation against winter cold and summer heat, the walls are of brick and are two feet thick. Nobody lives in the house except the batchelor mayordomo and a few servants, and even the batchelor mayordomo has a smaller house which he prefers.

Dinner comes at 8.30. I describe it because it is invariably the same, everywhere in Argentina, even in the humblest hut. It begins with soup. Then comes cold meat with fresh vegetables, then boiled meat with vegetables, then roast meat, then a pudding or a jam, then fresh fruit. The Mayordomo is lord of all on his estancia, and servants come and go at the touch of a bell or a nod of his head. There are servants to keep the house clean, cooks, waiters, coach men, chauffeurs, a gardener for the lawn, a gardener for vegetables and others. Not one of the six courses in our dinner but what is produced at San Juan. "Everything grows here," said Mr. Tasch. There were pears and peaches of splendid size and flavor, and big lucious bunches of blue grapes. It was not the season, or we would have had quinces and figs. Apples do not seem to grow so successfully.

Upwards of 50 men work at San Juan except during the winter. The mayordomo lives at the central homestead, with the servants I have mentioned, and the men who take care of the cabana, and the men who take care of the hogs. Then there is a "capitas" for the sheep, and one for the hogs. These men receive now from $30 to $50 a month, with their house and food. The capitas may receive 70 to 100 pesos (a peso is 43 cents.) A "puestero" to each league of camp is constantly riding among the cattle. This cattle rider is known as a "gancho." Then there are fence men, hay men, harvest men, and laborers in general, "peons" they are called, whose wage is their "camp," their feed, and 40 or 50 pesos a month.

Where do these men eat and sleep? That is the part I do not like to tell you about San Juan, or about any Argentine estancia, for in justice to San Juan it must be said that the men's quarters here are better than on the average estancia. Commonly, the men, with their families when they have them, live in one or two-room houses, built of mud brick, with a thatch or galvanized iron roof, with dirt floors, and with neither window glass, nor plaster, nor ceiling. This is the best their children ever know, or are taught that they should know. I do not suppose one "goncho" in ten ever entertains any genuine hope of owning land of his own. It simply is not a part of his plans.

San Juan, like a great many Argentine estancias, is English owned. Still many more are administered by English mayordomos. This fact should be borne in mind by those hoping to export American purebreds to Argentina, for these English people will buy very few bulls or cows from

A few of the 20,000 Herefords on the Estancia of Bernardo Duggan at San Juan, Argentina.

North America. The owner of San Juan, Mr. Bernardo Duggan, with his brother, and their mother and sister, own perhaps a dozen estancias in all. They are among the wealthier people of Argentina.

Morning of the next day at San Juan, bright and fresh, and at 7 o'clock we are ready to drive out among the paddocks of white face cattle. We work eastward, toward the far end of the estancia, nine miles away. As we pass thru the paddocks, Mr. Tasch always speaks in hundreds or thousands. Here are 300 old cows, with their last calves, fattening on alfalfa for market. Over here are 250 heifers, two years old, with the bulls for the first time. They are as alike in color and type as peas in a pod. Now we drive into a lot of 1400 steers, 24 to 27 months old, in one single lot of alfalfa. The lot contains 480 hectares, or 1,100 acres. This alfalfa has grown up and fallen over, and the young crop grown up thru it and fallen over in turn three times this season, since August last, until now the entire surface of the ground is covered with one thick mat so deep and dense that horses and cattle stumble in it as they walk thru it. Yet these steers have been pasturing it for many months, at the rate of 1⅓ 2-year-old steers to the acre, and will remain on it until "finished" for market in June, when they will yield 900 pounds of dressed beef apiece. Since the day they were weaned, they have not tasted other feed than alfalfa.

Next we see two lots of 500 cows each, with 900 calves together, each paddock containing 700 hectares, more or less, of "natural" grass. This will give you an idea of the difference in carrying capacity of "natural" grass and alfalfa. This "natural" grass is not native grass, which would carry even less, but grass which springs up voluntarily after the plow. You can judge from this how greatly the productivity of the territory has been increased by the sowing of alfalfa, and since there are many millions of acres of good alfalfa land not yet in alfalfa, how the extension of this seeding will still further increase the meat producing capacity of the territory. And every estanciero or mayordomo, at sometime during your conversation with him, drops the remark that he is getting more of his camp into alfalfa, as rapidly as possible.

But these two lots of white face cows and their white face calves, what a delight to the eye they are! Mr. Tasch had told us they were something special. We do not see any marks or tags, so we ask him how he keeps their registry straight. "Oh these are not pedigree cattle. These are just stock cows for growing steers." There was not one off-color, or badly marked as a Hereford, and they were of faultless beef type, but just stock cows, for growing steers. Again and again in Argentina, after inspecting what I had taken to be a select herd of pure-bred cows, I have been told that they were without pedigree, being only stock cows for growing beef.

Mr. Tasch tells me why he likes the Herefords. They run higher percent of calves, they will produce more beef from the same camp, and they can be marketed at a younger age. The practice at San Juan is to have the calves come in the spring which is August and September and ready for market at from 24 to 30 months. The poorer heifers are bred young, at 18 months. After weaning, the calves for beef go directly on alfalfa. Paddocks are reserved for winter feeding, and hay is put up in huge stacks holding from 70 to 100 tons, to supplement the reserve paddocks. Sometimes instead of putting the hay up cured, it is buried green under two feet of earth. It will keep this way for two years or longer, coming out a trifle cooked, but very palatable. There are no feed racks for the steers, nor feed bunks nor any other expensive equipment except fences. Fences cost money in Argentina, but they build them better than we do. Alfalfa and nothing else, save some native grass for the cows and calves, produces the beef at San Juan. I have asked several of the packers whether this alfalfa beef was first-class beef, and their answer invariably is that not one man in ten could tell it from corn-fed.

Once a sheep country, Argentina is now a cattle country, and it is the cattle industry which will grow and expand as the people come to work the new lands, and the ships come to carry the meat away. The livestock of Argentina, with the land and the equipment devoted to the industry, make up half the wealth of the Republic and if to this were to be added the capital of the freezing plants, the subsidiary industries working such animal products as hides and wool, and the shipping interests which handle only livestock products, the proportion would be ¾ and more.

An Estancia House at San Juan

How to Locate Lameness

By DR. W. C. FAIR, V. S.

First of all, let us understand that lameness is only a symptom of an ailment or affection and is not to be considered in itself as an anomalous condition. It indicates structural or functional disorder of some part of the locomotory apparatus, usually characterized by a limping or halting gait. Lameness may be classified as true and false. True lameness is occasioned by structural or functional defects. False lameness is an impediment in the gait. Often brought on by too fast driving. An animal may be slightly lame and the exhibition of lameness be such as to render the cause bafflingly obscure.

Nothing seems to puzzle the horse owner more than locating lameness. This, perhaps, is for want of sufficient knowledge of the symptoms of lameness; also, for lack of familiarity with the normal gait and peculiarity of action. Lameness is a manifestation of pain, indicating weakness, or inability, soreness or stiffness, causing partial or total inability to use the limb or limbs. Unless you are familiar with the normal gait of horses you may have trouble in locating a slight lameness.

Much can be learned by watching a horse during repose. If resting on all four limbs, the pastera on the lame leg will usually be more upright than on the other three; if the back part of leg or heel be tender, the foot will be held in advance of body. Resting the toe on the ground, bending the fetlock and knee, without the foot being in advance of the body indicates either elbow or shoulder lameness. When both fore feet are placed well in advance of body, the animal resting on the heels and both hind legs well under the body, the soreness is usually on the fore feet. There is something wrong when a horse rests on one foot much longer than the others. When a horse is inclined to lie down and remain there, it indicates weakness, or perhaps fracture or pain. A horse lame in hip usually travels out of alignment, but when lame in stifle he drags toe close to ground, and when the lameness is in hock, or lower down on leg, the foot is held in advance or slightly forward. A horse that walks lame, trots very lame. Lameness is best seen in the easy trot and if led, the head should not be pulled to one side.

In all cases of lameness where only one foot is involved the leg is lifted quickly and less weight is put upon that foot; therefore, a halting of the limb occurs. When one fore limb is affected the head and fore quarter are raised when that foot comes to the ground, but he is seen to drop on the well side. This may lead the inexperienced person to suppose the lameness is in hind leg. In lameness of one hind leg, the hip is raised higher than the opposite one and dropped carefully. With lameness in both fore feet, he steps short and puts them down carefully; he changes position often, the shoulders are carried stiff and upright; the head carried high; the loin arched and the hind feet brought well under the body. If the lameness is in both hind quarters the fore feet will be kept well back and under the body, in order to support and relieve the hind quarters of some of the weight. He will also back with difficulty. When a horse is lame on both legs of same side he usually ambles and never trots square, but drops heavy on the well side. A horse lame in right fore leg, when trotted from you, will appear to be lame in the left hind leg, because the quarter ascends and descends. A horse trotted in a small circle always appears to be lame in the leg nearest the center of the ring.

A horse may travel with a nod in front or a hitch behind and be sound. In some cases of soreness and lameness, the trouble soon leaves when the animal is exercised. To detect slight lameness, have the horse immediately trotted when he comes out of stable. Always examine the foot carefully and don't attempt to locate lameness quickly. Have the horse trotted towards you. By manipulation, you may be able to discover increased heat or pain, if not the lameness may be deep seated. In my practice I have made it a rule, never to prescribe, or apply a remedy, until I had first located the lameness and made a fairly correct, diagnosis of the case. However, I fear it is altogether too common practice to make a hurried examination and often apply a harsh remedy to a well part of the body, causing the animal more or less pain and suffering. Take plenty of time in locating lameness.

RECORDS BUILD BUSINESS

By R. G. Kirby, East Lansing, Mich.

The keeping of farm accounts requires little time and they are a barometer of success or failure that must be heeded in building a farming business. When poultrymen were going out of business because of the high costs of production we retained our flocks because the figures told that the business was still safe.

The profits were not large but losses were not the story told by the figures. The figures were not good enough to warrant much expansion at that time but they did report that no danger was present. Without the accounts a livestock keeper is very apt to overestimate either the profits or the losses depending upon the state of mind at different times. To a discouraged man all things look black. To the optomist sometimes things look better than they are. But the figures simply tell the truth and are a safer guide for a man's business than his own guesses.

City people are apt to think that everything that comes from the soil is profit. They cannot understand the cost of production. Farmers who keep accurate records can do much to prove to city friends that the farmer has not been a profiteer. A city friend recently told me that the hen never lived which produced an egg worth eight cents even in the winter. It did not take long to show him from actual figures that the cost of producing eggs did not make the business attractive to men who wished to profiteer.

The income tax has made it necessary for farmers to keep business accounts and they cannot make a report that is fair to the government and to themselves until they keep books. A guess is unreliable when it is based on fragments of memory concerning deals which have taken place over a period of a year. Bookkeeping has always seemed like a specialized occupation to the farmer. At the mill the keeper of books possibly sat on a stool with an eye-shade, a pencil over the ear and several large ledgers on the desk. Possibly he wrote checks with many flourishes. At least he looked quite prosperous with his clean collar and pressed trousers. Maybe he earned less than twenty dollars a week and envied the farmer's grain check. But the farmer did not know that and too often gave a man called a bookkeeper credit for more brains than was necessary.

A farmer can keep good farm accounts in one blank book ruled into two columns, one for credit and the other for debit.

(Continued on Page 20.)

Why I Like Farming

The Farm Presents Advantages which Promote a Wholesome, Happy and Healthy Life

R. G. Kirby

East Lansing, Mich.

It never takes more than three days in the city to make me like my farm better than ever. That is why we always take our vacation in the city. It is different. We could go away to a distant lake or canoe down the river or take a fall or winter hunting trip but we would be in an environment somewhat like the farm. It would be rather quiet and we would spend much of the time seeing farms and woods which are not much different from the locality around our own home.

When we go to the city, possibly at "Fair Time," we see many people and friends that we have not seen for a year or more. We take in the picture shows and the exhibits of various kinds. We see the crowds constantly and eat at hotels and restaurants where the wife does not have to worry about the meals. We learn the problems of the city dwellers who always eat away from home and ride on the street cars or guide their motor thru crowded traffic. After a few days of that life, the quietness of the farm begins to be appreciated. The butter, cream, milk, fresh eggs, fresh vegetables and fruit begin to receive comparison with the food we buy in the city and the farm ration wins the prize.

The air in the city is not so clean as on the farm. The exhaust from the motors cars is not good for eyes or head and the smoke from many stacks gives the face a dirtier feeling than the dust behind a drag. The environment of the farm is appreciated when in the city and the farmer who takes a city vacation often finds that his farm increases rapidly in real estate value. For a long time after the vacation he is willing to stick by the farm and work steadily with little desire to try some other business.

The independence of the farm life is something that money cannot buy in the city. There are men working in large cities in our state with much more income than I can make and yet they have no more to show for their labor at the end of the year. If they have a large lawn and flowers in the city they must hire labor to care for it and use expensive land for the lawn. Our lawn is large and yet we have no temptation to sell it to some company desiring to build an apartment house or an auto garage. We have no pangs of conscience because our large lawn represents a great amount of idle capital. But the grass grows green upon it and the shrubs bloom every year just as well or better than they would in the city.

A city friend visited us last week. He said, "Don't you feel tied down all the time with all this poultry and stock to be fed and looked after." We said, (We means my wife and I who agree on the subject.) Yes, we are tied down and cannot leave the farm for more than five hours at a time at most seasons without having some of the neighbors help with the work.

He replied, "I would not like to be held so closely to the work as that."

But he has two weeks vacation every year, no more and no less. He works steady for fifty weeks on a job that he does not like very well except on pay day and he does not like his boss very well which is not an unusual situation. We like our job and take a vacation every year. The remainder of time we are "tied down" and we are tied for more than eight hours each day. However, we like our job and cannot see any advantages to be gained by moving to the city even tho wages are high and it is possible to live in a cozy flat where the janitor will do all the work and take care of you just as well as if you were in a modern jail.

The exercise of the farm has made the doctor bills zero and this is a great satisfaction. A man cannot enjoy life unless he is feeling well and we have found no place where precautions and sanitation cause the body to respond as quickly as on the farm. The combination of good air, fresh food and healthful exercise are possible in farm life as in no other business. Of course common sense is necessary and the farmer who is careless has a fine chance for accidents in farming. Overwork during very hot weather has ruined the constitution of many a husky farmer.

After having lived both on the farm and in the city and finding the farm much the better place. I am inclined to turn to the people and compare them. City people sometimes call their country friends rubes. We like the people in our farming community. They are friendly and know what is going on in the world. Of course many of the city acquaintances became very good friends. But it is easier to make friends in the country. It is too bad that city men are obtaining the ownership of so many farms near good cities as this often means a tenant on the farm. And sometimes the tenants move so fast that it is impossible to become acquainted with them.

When a farmer begins to tell why he likes farming, of course he thinks of the good side of the business exclusively. There may be some detriments to farm life but when a business farmer studies the question from every angle he must admit that the farm is a good place to live. Farming can be made profitable as a business and the other advantages are often worth even more than money. Conditions vary on different farms and in different sections but anyway we have tried to tell the way we feel about the business.

Soils and Fertilizers

Conducted by Dr. J. G. Lipman

Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

OUR PRESENT AND FUTURE SUPPLY OF PHOSPHATES

It is generally agreed that, under intensive methods of farming, and especially in the case of staple crops like corn, wheat and cotton, phosphorus is likely to be a limiting element in production. It is true of the Middle West and the Northwest, as it is true of the Cotton Belt, that soluble phosphates used in moderate amounts are almost certain to give a profitable return and to provide in a better way for the upkeep of soil fertility.

Under more intensive methods of farming as it prevails over a large portion of the Atlantic Coast states, larger quantities of soluble phosphates are needed and give profitable returns. In this case, however, nitrogen and occasionally potash are found to be very profitable combinations with available phosphates. Half a century ago chemical fertilizer industry was in its infancy. Farm yard manures, wood ashes, animal bones and miscellaneous waste and refuse products were depended upon to maintain the productivity of the soil.

In New Jersey—and to a lesser extent in Delaware, Maryland and Virginia, greensand marl was used widely. This is a low grade fertilizer containing up to 5 or 6 percent of potash and as much as 1 or 1½ of phosphoric acid. All of these materials were relatively low grade, since they contained either a low percentage of plant food or plant food in a form not readily available. Hence, in the past fifty years there has been a remarkable growth of the fertilizer industry in the United States, representng now a consumption of about seven million tons.

In the manufacturing of soluble phosphates one ton of ground phosphate rock, containing approximately 32 percent of phosphoric acid is mixed with one ton of commercial sulfuric acid to make two tons of so-called acid phosphate, or superphosphate Evidently, therefore, the acid phosphate thus made will contain about 16 percent of phosphoric acid in available form. The availability itself is determined by chemical tests in the laboratory. These tests were established after much experimentation in the field and the chemical determination of available phosphoric acid is supposed to correspond to actual returns from the phosphate fertilizer in the course of a reasonable length of time.

The acid phosphate is, under the prevailing practice of manufacture, mixed with the ingredients containing nitrogen and potash and made up into mixtures designated as complete fertilizers—that is, containing the three ingredients, nitrogen, phosphoric acid and potash. The average mixed fertilizer contains about 8 percent of available phosphoric acid. It is obvious, therefore, that the mixed commercial fertilizer now on the market contains an equivalent of 50 percent of acid phosphate. Considering the consumption of commercial fertilizer the country over, it appears, therefore, that the farmers in the United States are now using two to two and a half million tons of phosphate rock, which is mixed with an equal amount of sulfuric acid to make from four to five million tons of acid phosphate or its equivalent. This consumption of phosphates is aside from the phosphate rock exported to foreign countries.

It need hardly be pointed out here that, because of the wide importance of phosphorus as an element of plant food, because of the very general response of cultivated land to application of materials containing this ingredient and because of the very large yearly consumption—a consumption which is rapidly expanding, it is of interest to every public-spirited citizen to know what our phosphate resources are, how the rate of con-

(Continued on Page Five.)

Farmers Studying Experimental Work on DeKalb Soil, Bradford County, Pennsylvania.

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THE PENNSY, lighter than a boot, warmer than a shoe. The ideal rubber footwear for all work around the farm. You'll get more service and save more money by wearing Pennsys this Fall. Made out of the finest grade rubber and fabric, absolutely water-tight, springy, tough, natural fitting and warm.

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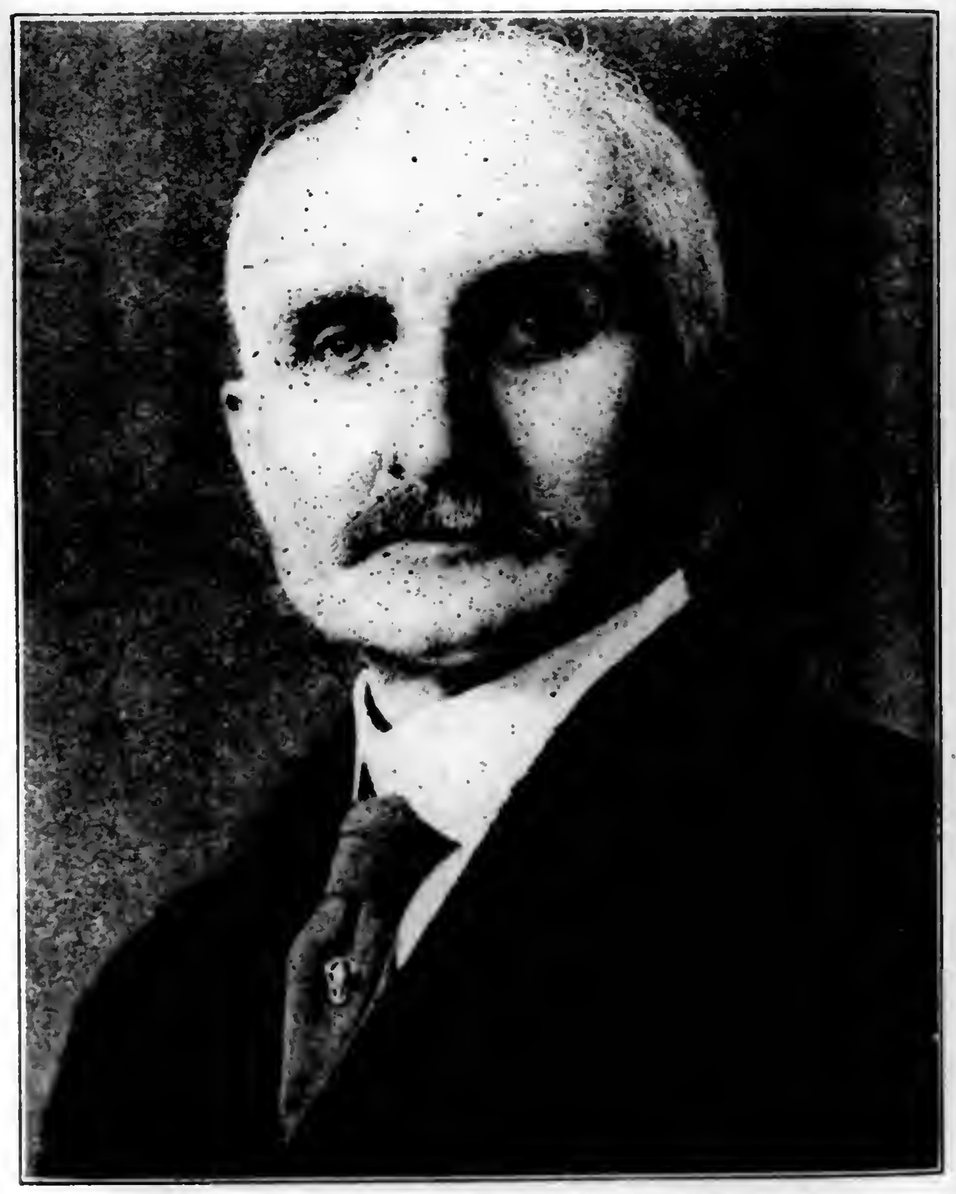
Uncle Sam's Hired Men Who Serve You!

The Bureau of Plant Industry has for its chief Dr. William A. Taylor, a man recognized as one of the highest authorities on the growing, storage, shipment and handling of fruits. He is known as a very thoro investigator, one that carefully weighs all essential factors before arriving at a decision.

While Dr. Taylor came to the department shortly after graduation from college, he brought with him a great store of practical farming knowledge gained as a boy, which has stood him in good stead upon many occasions in making his bureau of actual, first-hand aid not only to the farmers of the country but to the people generally.

Among the important accomplishments of the bureau under Dr. Taylor's direction, is its work to improve methods of handling, transportation and storage of fruits, vegetables and other agricultural products. It demonstrated the importance of precooling fruit before shipment and the necessity of shipping in ventilated cars. Its specialists worked out improvements in the construction of refrigerator cars to insure the necessary ventilation. This not only greatly reduced the cost of transportation, but also greatly lessened loses of fruit and vegetables in transit.



Dr. William A. Taylor, Chief of the Bureau of Plant Industry

Under Dr. Taylor's direction, there are approximately 2,103 employees, 868 of whom are located in Washington, D. C., and 1,235 engaged in the work of the bureau outside of that city. As occasion arises representatives are sent out to various foreign countries on exploration work in search of new plants that can be introduced and developed profitably in the United States, or to study plant diseases where there is danger of introduction to this country.

Among the important field activities of the bureau is that of investigating and studying methods for eradication of plant diseases. It is endeavored to diagnose and determine the cause of new plant diseases just as soon as they develop or are introduced into the United States so that measures can be taken without delay for checking their spread or means advised for restricting their further introduction. Notable work along this line has been done with regard to diseases of wheat, cotton, vegetables and fruit. Closely connected with this is the work of stamping out carriers of destructive plant diseases such as the common barberry which is considered responsible for the epidemics of black stem rust of wheat which so greatly reduce the crop of spring wheat in some seasons.

It is as head of a work of such scope that Dr. Taylor is in a position to place his great talents at the service of the country. He was born at Chelsea, Mich., June 23, 1863. He was graduated from the Michigan Agricultural College in 1888 with the degree of B. S., receiving his doctor's degree from that institution in 1913. Before entering the government service he managed a fruit farm and nursery in Michigan. He entered the Department of Agriculture as an assistant pomologist in 1891 and served successfully as assistant chief of the Division of Pomology, pomologist in charge of Field Investigations, and as assistant chief of the bureau until his appointment as chief in March, 1913.

There are many variations on the theme, but stated in a few words it is: Look over the harvesting machinery in ample time to get any needed parts.

OUR PRESENT AND FUTURE SUPPLY OF PHOSPHATES

(Continued from Page 3)

sumption is affecting present and future supplies and how we might conserve our phosphate resources for the benefit of those who are to come after us.

The information concerning the deposits of phosphate rock in the United States is not always accurate, especially in so far as it applies to the vast deposits located in the western states. On the other hand, the information at present available is sufficient to answer the questions raised above. Generally speaking, the deposits of phosphate rock are located in the southern and northwestern states of the country. In the order of their importance, Florida and Tennessee are the present sources of supply for the United States and, to some extent also, England, France and some of the other European countries.

It is estimated that the deposits in Florida contain about 227 million long tons, and that the deposits in Tennessee contain 88 million long tons of phosphate rock. Smaller amounts are found in South Carolina, Kentucky and Arkansas. The total estimated eastern deposits are equivalent approximately to 345 million long tons of phosphate rock. The western deposits thus far investigated are found in the states of Montana, Idaho, Utah and Wyoming. The present estimates show that the deposits in these states are not over approximately six billion tons of phosphate rock. However, it is probable that further exploration will add to the known volume of the deposits in the western states.

Professor Frank D. Gardner Explaining the Experimental Work on the Bradford County Plots

At the same time, it should not be forgotten that, as the agriculture of the United States develops, these vast deposits will be needed for increasing the productivity of our soils and that, large as they are, the supplies are not inexhaustible. It is not at all impossible that, as the demand from abroad is increased for our phosphate rock, legislation limiting the exportation of this material from the United States may become necessary. As it is, a market for phosphate rock from our western states is developing in Japan, and it is not unlikely that within another decade a very large demand for our phosphates will come from Japan, China and India.

(Continued Next Week.)

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AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880

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Member Standard Farm Paper Ass'n and Audit Bureau of Circulations

PHILADELPHIA, PA., SEPTEMBER 11, 1920.

VOLUME 48
NUMBER 11

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Photographs Wanted

IF YOU have some good, clear photos of farm scenes, poultry, stock, or anything which would be of general interest, send them in. If they are suitable to our needs we will accept them and pay for them. If not, we will return them promptly. It should be remembered that pictures must be sharp and clear to make good reproductions, and they must have illustrative and educational value to make them worth while. If you are not sure on these points, mail them to us and we will be the judges.

Lower Prices

THE TENDENCY to lower prices still continues in some lines. This is true not only of food stuffs but many manufactured articles as well. While it cannot be said to be general as yet, prices are gradually seeking a lower level and business men prophesy a continuation in this direction.

The query arises as to how selling prices can be lowered while wages, transportation charges and some other costs are stationary or continually rising. The answer is found in increased efficiency and smaller profits. All agree that there never was a time when production per man was so small as during the past three years, nor never a time when the tendency to profiteer was so great. With these two conditions corrected it would be possible to lower selling prices even while maintaining present labor and freight charges. These comments do not apply to farmers and their families. We believe it can truthfully be said that, in direct contrast with other workers, there never was a time when the farmer, his wife and children produced more per person than during these same three years. The prices of things the farmer buys will have to be materially lowered before business will be just and equitable on the whole.

Not Partisan

IT IS PERHAPS needless for us to state that Pennsylvania Farmer is not partisan in its political discussions. We are concerned only with politics in so far as it affects the welfare of agriculture, and are just as ready to oppose a wrong principle when espoused by one party as another. We will neither support nor oppose any ticket or candidate except as the best interests of farmers and the country in general require it. We state our platform in this regard for the information of those who may question the policy of accepting political advertising that may appear during the campaign. Aside from the business question involved we are editorially convinced that political advertising is a legitimate means of political discussion. More than that, we feel that every voter should be willing to have opposing arguments put up to him in the clearest way possible and men are not likely to waste words when they are paying advertising rates for space.

Political arguments stated in black and white are apt to be more cautious than those uttered by a spell binder to partisan crowd. The voter can sit down and read and weigh them, uninfluenced by the psychology of a crowd, and there is great need in this country for more sober thought upon political questions. These are some of the reasons why we believe in the growing custom of advertising political ideas, and our advertising columns are open to any bona-fide party or candidate for the dissemination of their ideas.

Any political advertisements we may run will be marked "Advertisement," and it is to be clearly understood that their appearance in Pennsylvania Farmer does not necessarily carry editorial endorsement.

Shall We Have Crop Insurance?

THE SUCCESS and generally satisfactory results of farmers' mutual fire insurance companies would suggest the possibility of organizing mutual crop insurance companies. In some places the practice of taking out insurance limited to hail and other possible destroying agencies is general. But in these days of high production costs when farmers expend practically all their cash and much of their credit in the planting and growing of a crop or crops there is need for some form of insurance against loss at marketing time whether it is occasioned by hail, drought, floods, insects, disease, falling markets or what not. In other words, the farmer needs insurance against loss in the costs of production.

Of course, such an insurance association would necessarily have to cover a large territory in order to spread the risk as much as possible. The farmers in any given small locality are subject to pretty much the same seasonal conditions, pest infestations and market prices, while all these may be very different in the country as a whole. A mutual crop insurance company confined to a single township would be of about as little value to its members as would a mutual fire insurance company composed of four farmers whose barns were all built together.

There is little doubt but what the aggregate loss to the farmers of the country from not receiving cost of production is greater than the total farm fire losses, yet no provident farmer would think of leaving his buildings without insurance. It would seem that the promotion of this idea would be good work for the grange or some other national farm body to take up and push. Already, at least one old-line fire insurance company is studying this field and has placed a few policies of this character on a limited number of crops. If farmers do not form companies for this work, somebody else will.

Neighborhood Storage Needed

THE EXPERIENCES of this year should be final proof to farmers that there is urgent need for cooperative warehouses and storage plants in the producing centers. As long as farmers depend upon other classes to care for and store their produce they will continue to get the short end of the transaction. Viewed from a purely business standpoint it seems foolish to expend the labor and costs of producing farm crops when no other alternative but to dump them upon the market when it may already be over-supplied. In all lines of farm production the harvest season is a time of plenty, and because most farm produce is quickly perishable, unless properly stored, the price invariably falls—often below the cost of production.

Seldom, if ever, is there more of any article produced than could be profitably assimilated by the market if it could be spread over the entire year. While the commercial coal storage houses are partially doing this work, they are not doing it fully nor are they at the right end of the line. They are located at the destination rather than at the point of origin of products, and are filled in times of plenty when prices are low.

By the right kind of cooperative work among farmers, storage plants to suit the products of every community could be established so that instead of dumping goods on an over-supplied market, or leaving them go to waste upon the farm, they could be stored and sent to market as needed. Other productive industries are not subject to the same economic conditions as is agriculture. The grower of fruits or vegetables has a harvest season of but a few weeks, while the manufacturer of shoes turns out finished products every day in the year and can thus feed the market according to its needs. With proper modern storage facilities the farmer could so conserve his products as to do the same thing. If it pays as a commercial venture, it would also pay the producer to do the work. Besides the better prices he would receive for products "out of season," he could prevent gluts as well as wastage on the farm. This is a proposition we propose to hammer away at until we get some results.

Our Washington Letter

The decline in prices of farm products is causing the farmers tremendous losses. This is the assertion of Sherman J. Lowell, master of the National Grange, who recently spent some time at the Washington Grange headquarters, after speaking in New England and several other states. "I have never seen the farmers hit worse by the drop in prices and the stagnation of their markets than I have experienced on this trip," Mr. Lowell said. "Potatoes have slumped so that New Jersey growers are facing losses of a serious character. The tomato market has gone all to pieces, and thousands of bushels are rotting on the vine, while other thousands are rotting on the loading platforms, because the growers are asked to prepay freight, when their last shipment did not bring enough to pay freight charges."

Mr. Lowell said that when he was in New Jersey the growers were receiving $2.40 a bushel for their potatoes which left them a small profit. Since then there has been a slump of $1 a bushel, bringing the price down to $1.40. It cost not less than $2 a bushel to grow these potatoes. The seed and fertilizer cost $175 an acre before the ground was plowed. Potato pickers have a union, which has established a charge of 65 cents a barrel for picking up the potatoes after they are dug.

Coming down into Maryland, Mr. Lowell found the tomato growers in the midst of just as bad a situation as was confronting the New Jersey potato growers. They were being offered 25 cents a ⅝ bushel basket which did not pay the cost of the basket. Growers refuse to pick at this price, and will plow under their crops. "Problems of this kind," he said, "will be taken up at the meeting of the National Grange in Boston, November 10th, at which 10,000 farmers are expected to be present."

Reports from the Grange field are very encouraging, according to Mr. Lowell. Between 70 and 80 new granges were organized in May, and nearly as many in June and July. Organization work is going to continue thru the fall. An especially large growth in Grange membership is being made in Missouri and Oklahoma. Ohio also reports a very large growth.

* * *

Tuberculosis eradication work under the accredited herd plan is proceeding very satisfactorily in most states, according to Dr. J. A. Kiernan, chief of the Tuberculosis Eradication Division of the Federal Bureau of Animal Industry. "Some thirty-five states were started in tuberculosis eradication work before Iowa got into the game. The first appropriation for this work was made by the last legislature. Notwithstanding that they got a late start, however, the Iowa farmers are now right up in the front rank in this movement. This campaign includes three projects: The accredited herd plan, eradication of tuberculosis in circumscribed areas, such as a county, and the eradication of tuberculosis of swine. A man is put into a county with the expectation of keeping him there for a few weeks, then transferring his services to another county. These men have been kept so busy that the State and Federal inspectors told the people in each county that if they were interested in cleaning up all the tuberculosis in their county, the way to do so was to co-operate by employing an inspector by means of an appropriation from their county funds. The people were willing to do this. They went before their county boards, who were also willing to go ahead, but waited for legal advice from the attorney general. This official told them that they had no authority to appropriate money raised by taxes for this purpose."

Dr. Kiernan says this situation prevails in several states, and the law enacted by the Alabama state legislature last year to meet this objection is suggested as a pattern for other state legislatures to follow. This new Alabama law provides that "county boards of revenue or county commissioners may appropriate as much money as shall be deemed necessary for the control or eradication of any infectious, contagious or communicable diseases of live stock or the control of the cause of such diseases of live stock. This fund shall be used in co-operation with the State Live Stock

Sanitary Board or the Federal Bureau of Animal Husbandry.

* * *

The committee on Statistics and Standards of the United States Chamber of Commerce sees no need for being "panicky" over the present industrial and financial situation. It reports a widespread feeling that business will probably continue good for the remainder of the year. "The problems which now confront the farmer," the committee says, "are what the future holds for him in the way of prices for his products and whether adequate transportation will be forthcoming to move harvest yields to market. Upon the solution of this latter problem hangs the volume of business in all agricultural sections, which means by far the greater part of the country. From every state and every section comes the complaint of the lack of cars as the greatest of all handicaps to the transaction of business, and one of the moving causes of the continuance of high prices.

* * *

American Farm Bureau Federation delegates returning from their Western trip to the Washington headquarters, report a very enthusiastic meeting of the Federation at Denver. The Salt Lake City meeting, which was held for the purpose of discussing methods of solving the wool situation, was attended by many prominent wool growers from all the leading wool producting states.

At this meeting, Gray Silver, Washington representative of the American Farm Bureau Federation, made a report in which he stated that there was an abundance of wool, but not an excess of the better kinds most used in this country. There is a large quantity of low grade American wool that in former years has been consumed by Germany and Austria. There is a bill now in Congress providing for granting Germany a credit against the account of the alien property held in this country. There is nearly a billion dollars worth of such property, in addition to the merchant ships held by the United States, whose valuation about equals the claims filed by citizens against aliens, or about $600,000,000, leaving a net credit on Germany's account of nearly a billion dollars.

It is the belief of Mr. Silver that the United States, in order to protect itself must promote the international relations of the farmers in a business way, because the country is safe only when we grow enough for our own needs and a surplus for other nations. In justification of this assertion it may be said that six of the biggest crops produced in this country are priced in markets beyond our shores.

* * *

The action taken by the Interstate Commerce Commission in ordering a readjustment of lake-rail rates on grain so as to make possible the carrying of grain by lake boats at a profit, came "as a great relief to the farmers of the Middle West who have lost heavily because of the inability to move their crops to market," says a Farm Bureau Federation official. Delegation after delegation has come to Washington to appeal to the Commission for cars and the Federation proposed the plan for rate readjustments which would put the lake boats back into the grain carrying trade. Governor W. L. Harding of Iowa, and J. R. Howard, Gray Silver and other representatives of the American Farm Bureau Federation made a strong appeal before the Interstate Commerce Commission and since the Commmission had already looked into the matter and was favorably impressed, quick results followed. The benefit to be derived from this arrangement agreed to by the roads will come not alone from the release of grain cars loaded for the East, but the elimination of the long empty return trip to the West. By utilizing lake boats for the long haul the available supply of grain cars can be suttled back and forth between Buffalo and the seaboard at the eastern end, and thereby greatly increase the effective car supply. The Farm Bureau men are also working on a plan for greater utilization of the Barge canal between Buffalo and the Hudson River.

* * *

The five big meat packers have filed with the Supreme Court in Washington plans and specifications for the disposal of their stockyard interests, as required by the Federal Department of Justice. The value of the stock represented by the statement submitted to the District Supreme Court was placed at between $30,000,000 and $40,000,000, and it is planned by the packers to sell their stockyards to F. H. Prince & Company of Boston. The Boston firm proposes to organize a holding company to take control of the interests to be acquired with the sanction of the courts, according to an affidavit submitted by Frederick H. Prince, head of the company, to the court. It would not be practicable, he said, to try to dispose of the yards separately, owing to the uncertain financial conditions, and the holding company planned the gradual selling of the interests which it would control under the proposed arrangement.

HARRISBURG LETTER

Strikes Do Not Help.—Pennsylvania is again short of farm labor and state officials frankly admit it. Workers from cities and towns to help out at harvest time did not show up as expected and now the autumn season is here and altho there are industrial stoppages due to strikes and layoffs farmers are begging state employment agencies for hands and fruit growers are telephoning for people to help. The important fact is that the farm is not getting the benefit of disturbed conditions in other lines of activity, reports to the contrary notwithsanding. Some of the counties where miners have been idle off and on have had assistance from men otherwise idle, but the counties near the larger cities have not been aided in their farm labor problems. In some of the interior counties there are hopes that the influx of laborers from Europe may be the means of getting a readjustment of the labor supply and of getting people from the country back again where the cost of living is not so near the clouds.

For Better Live Stock.—Secretary of Agriculture Fred Rasmussen, who has been making a series of addresses urging more attention to live stock, says that he has found interest being awakened in many sections of western Pennsylvania and that where men have been unable to obtain necessary help they have been experimenting with cattle. Owing to wool prices the sheep raising boom seems to be over, but the prices for beef cattle have been causing thoughts to turn in that direction. The secretary says what he found in half a dozen counties was gratifying.

Protecting the Roads.—The State Highway Department, whose men have been stopping trucks and weighing them for the last three or four weeks, has ordered arrests by the dozen and they will be started at once. Most of them will be in central counties where roads have been torn to pieces by heavy travel and where drivers in charge of vehicles loaded far beyond the limits of the law were caught red handed. In some instances men who had been warned of the harm they were doing were found violating regulations. Similar campaign will be conducted in every section.

Following Up the Surveys.—Officers of the State Bureau of Plant Industry are out in the field following up results of surveys and studying extent of the potato wart disease in western counties. The potato ailment was found in isolated localities and it is believed quarantines similar to those instituted in the anthracite region will stamp out the trouble and that development of immune varieties will help. Incidentally, agents of the federal government have been here in consultation with Director J. G. Sanders regarding Pennsylvania's part in the war on the gypsy moth, which is going to take time and dollars.

Apple Law in Effect.—Numerous publications regarding the provisions of the new apple law have been put into the hands of the growers and state inspectors are now in the field overseeing its enforcement. Demonstrations have been given in several of the fruit raising centers under auspices of the State Bureau of Markets. The plan is to have the inspectors go into the larger markets and the wholesale sections later in the fall.

Turned Up Much "Yellows."—Men engaged in the survey of the peach orchards of the state have turned up considerable "yellows" in the last week or so and from reports made here believe the survey was justified The discoveries have not been made in big peach raising sections or in large orchards, but mainly in the smaller orchards where the same care is not given as in the big enterprises. Stringent regulations to get rid of this disease before it gets the hold which cost the farmers of the state so much money twenty-five years ago will be taken.

Small Schools Closed.—Results of the first week of school are being eagerly awaited in the Capitol as in over a score of districts the attendance reports of the last year and present prospects showed inadvisability of reopening, thus bringing about consolidation. Some protests have been filed, but the disposition here is to enforce the law and require consolidation. A number of districts have held back opening until this week because of the teacher situation. The belief here is that more vocational schools will be in operation outside of the cities and towns than ever.—Hamilton.

NEW YORK LETTER

How Not To Sacrifice Potato Crop.—A leading potato grower of Cortland urges other growers not to sacrifice their crops by selling too early and too cheaply. At the cost of production prevailing this year he is sure no potatoes can be sold for less than $2 per bushel without a sacrifice of profits. He quotes figures and conditions to show the crop to be slightly less than last year and that the indications are a price of $2.50 a bushel within three months. Many must have the money for the crop immediately, and such should consult local banks. This grower is also a dairyman and believes he will be the gainer to sell his dairy and hay as at the price of $3.65 for milk and $3.65 to $4 per cwt. for feed there is nothing gained in producing milk but the fertilizer.

Investigating Rural School Conditions.—A joint committee of 21 members, three representatives each of the Grange, the Dairymen's League, the Home Bureau, the Farm Bureau, the State Teachers' Association, the State Department of Education and the Department of Rural Education has organized with Prof. George A. Works of Ithaca as chairman. The committee will secure all the facts possible concerning the conditions in rural schools and will make recommendations which are expected to produce real results.

Decline of Farming.—Farming has steadily declined in New York in the past generation and it is believed the decline has not touched botom. The soil is fertile, the market close at hand, and its farmers do not lack will or intelligence. They have lacked fair prices, which are now looking up, but not to the proper and stable level. They do and will lack help. Wayne County in the rich fruit belt, is a typical rural county of the best sort. It has no city and eight villages. The rural population has lost 1,325 in the past ten years by removal to city wages and advantages.

Apple Pie Week.—This is "Apple Pie" week so designated by the State Council of Farms and Markets, to help to increase the consumption of early apples, which are wasting for lack of a proper demand. Arrangements are being made to have the large chain stores, which have never handled apples, buy direct of growers and put them on the retail market at fair prices. Arrangements are also being made with the buying bureaus of other states. Commissioner Porter is appealing to Chambers of Commerce to help in saving the apples.

Boys' and Girl's to Judge.—A big feature of the state fair will be the judging contest in which boys and girls from 16 to 20 years will judge horses, cattle, sheep, swine, fruits and farm produce, for very liberal pro rata and special prizes. The cash prizes total $825 in this work.

Guaranteed Alfalfa Seed.—Farm leaders of the state recently conferred with Michigan leaders and an arrangement was made for the two states to secure surplus alfalfa seed from Idaho, South Dakota and other northwestern states. This is to insurance hardy northern seed without outbidding against each other for it and to discourage the use of southern grown or imported seed which does not give satisfactory results.

Cattle Tuberculosis.—The State College is preferring a very instructive exhibit showing methods of diagnosis and control of this disease with specimens of it and maps and charts illustrating its spread. At Cortland's annual farm picnic on Labor Day a ring of cattle containing two cows known to have the disease will be shown and the farmers will try their skill in locating them. The two will then be killed and the carcasses shown. As the leading dairy state we need to do more to familiarize the people with the disease in order to assist in eradicating it.

Rural Needs.—On September 7 of the State council of Farms and Markets calls a meeting of farmers, bankers transportation officials in Syracuse to take up rural problems such as finances, distribution and food storage. The purpose is to acquaint the public with what the Council has done and proposes to do.

State-wide Home Bureau Program.—Thirteen city and county Home Bureau agents and three representatives of the State College extension department met last week to discuss "Standardization of the Individual's Clothing." A plan to interest the women of the state in selecting and making clothing on an economical basis and to emphasize consistency and harmony of color was worked out for state wide adoption as soon as possible.—F.

NEW JERSEY NEWS

Crops Better.—Crops in New Jersey have been better during the past week than during the several preceding weeks while there was an improvement in farm work, despite the fact that the weather was somewhat too cool, cloudy and wet with deficient sunshine. General crop conditions are mostly satisfactory, except in the regions of heavy soils where excessive moisture is retained wth unfavorable results. Corn in the state needs warm and drier weather but is earing well and is in fine condition. Considerable plowing has been done for wheat and some rye has been sown. Some oats are still out and sprouting has resulted from the wet weather, but it has been less harmful than was generally expected. Meadows and pastures have had one of the best seasons every known in New Jersey for continuous growth, but unfavorable for cutting and curing of hay. Potato digging continues and shows some rot, but to no serious extent. Sweet potato vines are of too rich growth, and potatoes are very good. Tomatoes are mostly good, but are not ripening as rapidly as previously. Apples and peaches are in pretty good condition, and the height of the peach picking is progressing Northward.

Cooperative Body Formed.—The Monmouth County Cooperative Association has been chartered in the office of the Secretary of State here to operate from the courthouse at Freehold in that county with Samuel Craig Cowert as agent in producing, preserving, drying, canning, storing and marketing dairy, agricultural, and horticultural products. The organization has no capital stock, but will issue certificates of membership after the payment of a fee by the members. The organizers and incorporators of the association are Samuel Craig Cowert, of Freehold; Daniel H. Taylor, of Holmdel; Charles R. Applegate, of Freehold; Tunis Denis, of Freehold, and Thomas B. Lewis, of Freehold.

Car Shortage.—Declaring that a freight car shortage exisits by which they stand to lose hundreds of thousands of dollars unless immediate relief is given for the movement of potatoes, farmers of Central Jersey counties have demanded that the Interstate Commerce Commission rescind at least during the present emergency car pooling regulations, which the growers charge are responsible for the great tieup of shipments.—Kelly.

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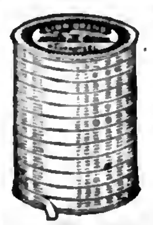

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HORTICULTURE

HARVESTING, STORING AND SELLING THE SWEET POTATO CROP

Harvesting the sweets often means to the farmer digging the potato as soon as possible, storing a few and marketing the remainder for what they will bring. Harvesting the crop should have the time allotted to it before the potatoes are planted. It is a difficult matter to handle a large crop of late potatoes or second croppers and have field corn ripening and try to save the fodder in good shape for the stock something will have to suffer. Growers will let sweets go until long after frost and then the potatoes have to be sold in many instances at a sacrifice.

Sweet potatoes are a crop that will easily fit into rotation. Successful growers in South Jersey, Delaware and Maryland use in this rotation field corn, tomatoes, sweets and hay. Timothy and clover is sometimes sowed in the tomato field at the last cultivation. Some truckers add early whites and sow grass seed after harvesting. This rotation makes one in which harvesting the different crops comes at different times. After early whites are harvested and grass sowed, attention can be centered on the tomato crop, after which corn is cut before frost and the sweets dug and stored before November.

Where a man is on the market garden end, harvesting sweets presents a more difficult problem. Many crops are being harvested and it often means hiring extra labor to care for the crop. The main essential in any case is to dig the crop and store it quickly and carefully.

Near the large cities growers begin digging early to obtain the good prices that are paid for the crop at that time. When this is done part of the vines can be cut and after digging, a one horse cultivator can be used to level the ground. Where there is a very small crop or only a basket at a time is to be dug a spading fork with four prongs at a slightly straighter angle than the stable fork is the tool. A potato drag or hook is a handy implement to dig a small quantity.

When old Jack Frost begins to place his nipping fingers on the corn, and the sweet potato vines become blackened they have made all the growth that can be made and everything should be in readiness to harvest the crop. Where there is a large crop or shortage in help digging should begin before frost.

A cutter equipped with two razor like runners to run over the vines and cut them is an excellent means of saving time and labor. It should be kept well sharpened. I have seen a man cut over five acres in a day. For small areas a hand vine cutter can be used.

For digging the crop there are several different methods. Many truckers are now using the white potato diggers with the chain removed. Great care has to be exercised in the use of the digger as it will scar and cut the potatoes. The preferable implement is the sweet potato plow. Many of these plows have vine cutting disks attached. A number of steel rods extending in a fan shape beyond the moldboard help to free the potatoes from the dirt. An ordinary two horse plow properly adjusted will do excellent work. The plow or digger should be so adjusted that the potatoes are thrown right on the surface so men or boys can follow after and shake out the bunches and place them on the ridges to dry. When they are sufficiently dried two men can take two rows each and pile the potatoes in the centre of one of the four rows care being taken not to bruise. Potatoes should be sorted in the fields right from the piles into baskets. Primes placed in one basket, seconds in another and culls in a third basket. Hog feed and seed potatoes should be kept in separate containers.

Crops Grown on Newly-Drained Land

Several days before digging fire should be started in the storage house and temperature of 85 degrees Farenheit should be maintained until ten days after all the potatoes are stored. when it should be slowly lessened until 60 degrees is reached. The ideal way to keep the potatoes is in bushel hampers or crates. Most storage houses will not permit this so bins should be made as small as possible and thoroly disinfected before storing the crop.

The care exercised at digging time will repay many times over for itself. When the baskets are brought to the house for placing in the bins these should not be thrown in but the basket inverted in the place in the bin where they are to remain. These sweets should be undisturbed until they are to be sold and when removed from a bin the quicker the

bin is emptied the better as stirring starts the rest to decay. Potatoes showing evidences of ground rot, or black rot should be sold from the field. Discolored specimens and any hills suspected of stem rot should follow in like manner.

When potatoes are to be sold from the field the grower should make a tour of the surrounding fields and see the condition of the crops grown in the vicinity. Then look up your buyers and try to obtain the highest price possible. Many farmers will dig the crop and wait for someone to come along and buy them. Energy is as necessary in disposing of the crop to advantage as growing them. When you have your crop sold grade honestly and give the purchaser no cause for complaint. Give good measure and you will probably have him back the next year willing to buy at a good figure.

Where there is a small crop a box is made near the stove in the kitchen and the potatoes kept warm. If the fire is allowed to go out at night blankets or other covering should be placed over the box to keep the potatoes from becoming chilled.

Below Delaware potatoes are kept mostly outdoors in pits. High ground is selected and leveled about ten feet square. A wooden pipe is placed in the middle extending upwards. Potatoes are laid on pine needles or straw in a conical heap forty, or more baskets in each heap. These are covered with straw and as cold weather advances dirt is added to about six inches. Rye straw is often placed on top to help shed water better. Poles are placed under the heaps to aid in drainage, and sometimes trenches are dug from the centre outward.—J. E. Toomey, Atlantic Co., New Jersey.

WAR ON GYPSY MOTH WILL COST MILLIONS

Entomologists from the Pennsylvania Department of Agriculture as well as from the state departments in New York, New Jersey and other surrounding states have estimated that it will require $5,000,000 to stamp out the gypsy moth menace.

The Bureau of Plant Industry of the Pennsylvania Department of Agriculture has every available man of its field force at work running down shipments of infected nursery stock sent into this state recently, from New Jersey. The gypsy moth has been found in only one place in this state—on an estate in Cambria county and has been stamped out there but the vigilance will not be relaxed and it is believed that thru this work Pennsylvania will overcome the pest at a fraction of the cost that a number of the states will have to pay.

APPLE OUTLOOK IN NORTHERN AND SOUTHERN TIER COUNTIES

The outlook for apples in the eight northern-tier counties of Pennsylvania on August first, was 102 percent compared with a normal or full crop. This indicates an abundant crop. The prospect in the eleven southern-tier counties was 80 percent of normal. This percentage should be weighted somewhat due to the fact that outlook in Adams was 90 percent and Franklin 85 percent.

Yes, paint does cost more than it used to. But a little will go a long way in sprucing up that dingy kitchen.

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What Scalecide Does

Scalecide kills scale, insect eggs and fungous spores that winter over on the bark. It cleans up the trees so thoroughly that their increased vigor is strikingly noticeable the following season. The Fall application kills the adult Pear Psylla before it lays its eggs. A Spring spraying, just as the buds show green, kills aphis. Either of these applications controls blight.

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Scalecide is a soluble and miscible oil—not only an insecticide for scale, but it has both fungicidal and germicidal properties. And because the oil globules are broken up into such microscopic particles they are able to penetrate the diseased bark and tissues, and thus reach the bacteria that cause fire blight. Scalecide actually *penetrates and invigorates* the plant tissues.

Saves Labor

One barrel of Scalecide does the work of three and a half barrels of lime-sulfur. 800 gallons of Scalecide (diluted 1 to 15) goes farther than 1,600 gallons of diluted lime-sulfur, and of course you can put on 800 gallons of Scalecide in much less time than 1,600 gallons of lime-sulfur.

Protects Your Spray Pump

Lime-sulfur eats out the valves and other parts of the spray rig with which it comes in contact. It causes the spray hose to crack and go to pieces. Scalecide, because it is an oil, helps to protect the spray pump from wear and tear and prolongs its life; it makes the pump run easier and develop higher pressure.

Pleasant To Use

Lime-sulfur burns the hands and face, often injures the eyes, takes the hair off the horses and eats the harness—it is extremely disagreeable to use. Scalecide soothes the skin, does not injure the eyes, improves the hair on the horses, softens and cleanses harness—it is *pleasant to use.*

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W. D. POWER & CO. 601 W. 33 St., New York are the largest handlers of commission hay in greater New York; if you have hay to dispose of communicate with them.

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DAIRY

PICNIC AT SCHWENKSVILLE

Three thousand farmers and their families attended the first annual Montgomery County farmers' picnic in Memorial Park, Schwenksville. The picnic was in charge of county agent, A. K. Rothenberger and his assistant Addison R. Kriebel.

A feature of the picnic was the exhibition of the bulls of the Montgomery County Pure Bred Bull Association. This was the first time the bulls were shown together. They are stationed at different parts of the county so that the members of the association have easy access to their services. Membership in the bull association now totals 44 and the exhibition of the pure bred stock at the picnic brought more calls for membership to Mr. Rothenberger, who is general supervisor of the association.

One of the important factors considered in the selection of these bull calves was that the dam and granddam must have a yearly record. As an indication of the class of animals purchased it may be remarked that Meadow Holm Bromide Ormsby, dam of one of the association's calves was sold at the recent National Holstein sale for $1500. Every section of the county is represented in the association. The Perkiomen Valley district alone has 22 members.—F. C. Hillegass, Pennsburg, Pa.

Bulls Belonging to Members of the Montgomery Co., Pa., Purebred Bull Association

Part of the Crowd at Schwenksville Picnic, Montgomery County, Pa.

NOTES FROM THE NEW YORK DAIRY FIELD

The September price schedule for milk goes into effect now and it has been fixed at $3.65 for the two hundred mile limit for three percent milk. Right here in southern Chenango where we have little but milk to sell we get for 3.6 percent milk $3.85 a hundred pounds at the station. It was predicted that this would be the lowest proportionally of the summer months. At the present moment we have sufficient rain and the pastures are good and so are forage crops. This goes far to make dairying profitable. It rather looks as tho there might be some profit in milk this month. Grain is high but not quite up to the spring months. Some grain is being fed but not so much as in a dry season. Besides it appears that some dairymen are not feeding enough to keep up the flow. If cows get off on production and get thin there is no getting them back on full production again until they are brought to condition.

Demand for cows is not strong at the present moment and no one seems to assign a reason. There are some offered for sale. It is not impossible but that in the course of the month prices and demand may revive. Milk prices are expected to be good this fall but possibly dairymen wish to know definitely before stocking up. The New Jersey and Long Island producers of milk are upset and just now are not buying. Distillery waste can no longer be had and hay went to unheard of prices so that milk could not be produced at a profit. If something makes for profit there cows will come into demand again in those sections. It looks as tho that lack of call may have something to do with our cow markets. Possibly it is not a bad time to buy if one has the hay or other roughage to feed. Then cows that are drying off for the winter are in no demand at all. If they are coming fresh in the spring it may be that this is the sort that may pay well to buy.

Manufacturers of milk products are still stocking up on such as dry milk, condensed, etc. League butter is in strong demand and the retail price is being held up pretty full. The same is true of western creamery, but unfortunately for the dairy interests much of the butter on the market is of inferior quality. One is almost tempted to guess that butter makers are in the employ of the butter substitute business. At any rate nothing so advances the demand for substitute butter as the stuff that goes on the market as butter. Dairymen are vitally interested in this but

em to be powerless to stay the ten-ncy toward substitutes. It is going take a big revolution to get butter into popularity again.

This is the month when we expect that the winter prices will be determined. I look for this to be done rather late in the month as the dealers may wish to get as much surplus milk as possible in making negotiations. Milk production is due to improve a little during the month. There are no indications that there will be serious trouble in getting the price fixed, still I have heard some say that they expect that there will be. Personally I doubt it. Not but what there will be difficulty during the negotiations and some disagreement but no, or very little, threats of refusal to buy. We expect that the price will be one to make a profit for the most of the season, but that is absolutely undetermined at present.

Last year October gave us for 3 percent milk, $3.11 at 200 miles and December only $3.64, while March went to $3.38. It will be noticed that December milk brought only about what we get for September this year. We have reason to look for a price that will nearer pay the cost of production this winter than we got last. There may be disappointments due but they will be genuine if we don't get a fair price. A loosing [illegible] will bring discontent all along the line. The League co-operative is so much of an assured fact that there can be no likelihood that dealers will strike on the price determined, for that will be a fair price. To hold up on a fair demand will cause the co-operative to come across in short order and it is doubtful if dealers will permit that encouragement. Just now there is quiet along the development line of the co-operative situation. A little opposition will send it rapidly to the front.—H. H. Lyon, Chenango Co., New York.

N. Y. TESTING ASSOCIATIONS SHOW SOME GOOD COWS

Recent reports of cow-testing associations in New York show that the largest organizations are in Delaware and Cortland counties where 608 and 607 cows are tested respectively. St. Lawrence comes third with 518, and Broome and Orange are almost tied for fourth with 493 and 492. A new association has just been formed at Chafee in Erie County.

Livingston and Cattaraugus counties' associations have the highest number of 40-pound producers.

Of the associations reporting, the high cow for the state in butter fat production, for the month, is a Jersey in the Warsaw-Varysburg association in Wyoming County, followed closely by a Holstein-Friesian in Tioga County. In pounds of milk the same Holstein-Friesian leads the state, followed by a grade Holstein in Cattaraugus County.

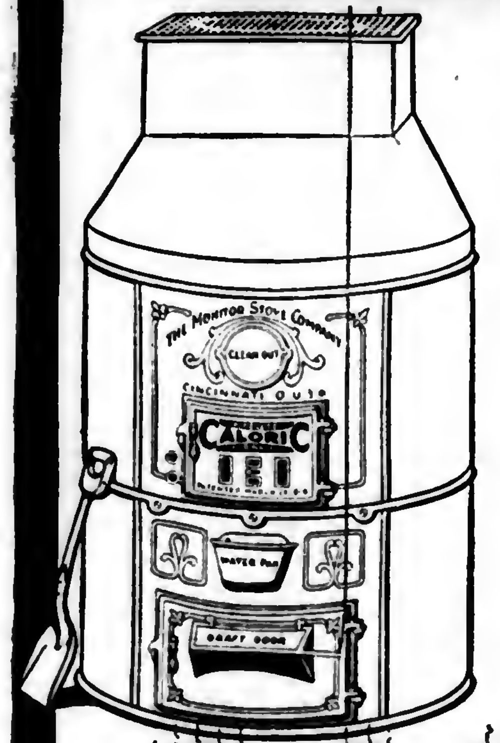
In many counties pastures have been short, and flies troublesome.

SIXTY FARM BUREAUS IN PENNA.

With the recent organization of Farm Bureaus in Synder and Forrest counties, provision was made for the appointment by the Pennsylvania State College extension service, of county agents for each. With their selection within the next few weeks all but seven of the 67 Pennsylvania counties will be active in this respect.

there a bullshevike on your farm? There is if you have a scrub bull.

SEPTEMBER 11TH to 18TH



Learn how to cut fuel bills 1/3 to 1/2—and have your entire home warm and cozy in coldest weather—by attending "CaloriC National Prepare For Winter Week" exhibits.

Beginning Saturday, September 11th, and continuing eight days, special "Prepare For Winter" exhibits will be made by thousands of CaloriC dealers in all parts of the United States. Visit the CaloriC dealer's store in your community—"Heating Headquarters"—and learn WHY the CaloriC burns less fuel and heats more uniformly.

Made by largest manufacturers of warm-air furnaces in world. Sold under Money-back Guarantee. No plumbing, no pipes to freeze, no expensive installations. Over 100,000 users, many in this state—in your neighborhood.

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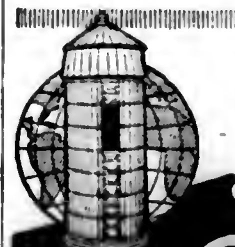

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We are agents for the Ohio Ensilage Cutters. With a big stock on hand we can make prompt shipment. Send for Catalog and attractive prices.

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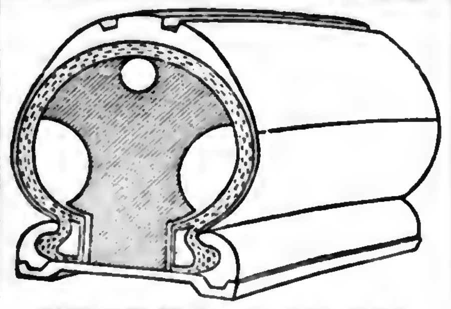
HAY Ship to The Old Reliable House DANIEL McCAFFREY'S SONS 621-25 Wabash Bdg., Pittsburgh, Pa.



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The tire without a tube. The tire that knows no trouble. The tire that takes you away and brings you back. Rides like a pneumatic and gives you almost three times the wear. This is the tire you have always wished for. Now you have a chance to get it. Ask your home dealer for the tire. If he does not have it write the factory.

Triple Airless Tire Co.
MANORVILLE, PA.

Wonderful Cow Tonic

How About Your Cow? Off her Feed? Not Producing the milk she should? Try [illegible] cow Tonic. More Milk. [illegible] and Harmless. [illegible] ACTIVE Med [illegible] WORKS WONDERS AFTER CALVING [illegible] MORE MILK MEANS MORE MONEY [illegible] Mr. Dairyman.

Compounded and Sold by
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MAKE FALL AND WINTER DAIRYING MORE PROFITABLE

There is surely no reason to delay the purchase of a separator or to continue the use of an inferior one. A De Laval Machine will save its cost by spring, and may be bought on such liberal terms, if desired, as to actually pay for itself meanwhile.

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SALE OF U.S. Army & Navy Goods
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and all other articles for camp or outdoor use.

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Name "Bayer" identifies genuine Aspirin introduced to physicians in 1900. Insist on unbroken packages of

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In wearing apparel for women, men and children—and all at big money savings because of our inexpensive location. The smartest styles in suits, skirts, coats, waists, shoes and dresses; the newest furs, the loveliest underwear—all guaranteed better bargains than you can buy elsewhere, or *your money back*. Hundreds of wonderful money-saving opportunities for every member of the family, like this

Remarkable BARGAIN IN Men's Black Dress Shoes. A $6.00 VALUE FOR $3.98

Comfortable, stylish, long wearing—made over comfort last; has medium oak sole of excellent wearing qualities. Neat appearing, pliable, enduring chrome leather vamp and tip. Order by Style A104, sizes 6 to 11—send only $3.98.

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The comfort and long wear in these fine hand turned slippers will delight you. Cool kid finish upper, pliable leather sole, elastic rubber heel and soft cushion insoles all spell 'foot-ease'

FROM FACTORY TO YOU

We manufacture these shoes. We know what is in them and will vouch for the excellence of the material.

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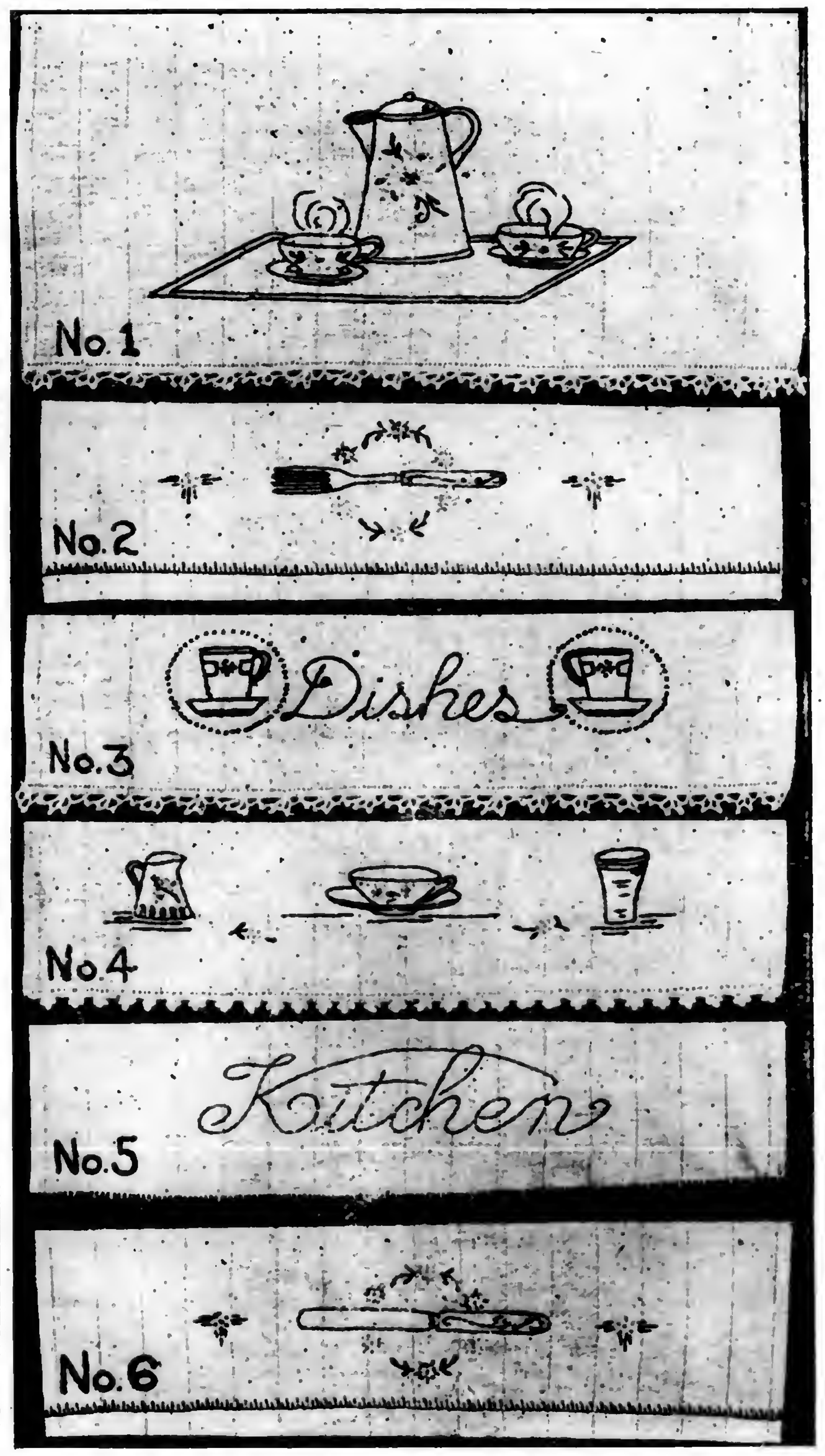
HOUSEHOLD

USEFUL GIFTS FOR THE HOME

By JEANETTE BELL

We all know how useful and how much appreciated are the gifts of towels for the bath room. Those of us who have not made the decorative kitchen towels, do not realize what lovely gifts they make. Little girls just learning to outline will find that they can make a present for Mamma of one of these towels for the kitchen rack. When the heavy work of the day has been completed and after brushing up the crumbs, how often one notices with regret, that the only mussy things in sight, is the dish towel, which has just been used. To have handy a dainty and yet appropriate towel to throw over the mussed one, is a satisfaction to the particular housekeeper.



Designs of Decorative Kitchen Towels

In many homes, the help problem has forced the family to assist in saving work by eating, at least two meals of the day, in the kitchen. Under these conditions, the room becomes a combination and demands that unsightly objects be hidden, especially at meal time.

As a shower gift to the bride-to-be or as part of a Hope Chest, these dainty blue striped glass towels will appeal.

Towel No. 1, shows the tray with China coffee pot and two cups, the outlines are all done in three shades of wood brown. Six strand mercerized embroidery cotton was used for all this embroidery work. One small skein of each shade will make several towels. For the outlining two threads were used in the needle at once.

For decorating this china, pink flowers and yellow centers with green leaves were used. The petals of the flowers were done in lazy daisy stitch, for which, three threads were used in the needle at once. For the centers, use 6 threads of deep yellow and wind once around the needle, for each French knot. The tray was outlined in the darkest shade of brown, while the steam above the cups was of the lightest shade of brown.

For the edge, turn and baste the hem, just above this draw out one thread, of No. 50 Cordonent crochet cotton make,

1st row: s c over hem into the space left from the drawn thread, 5 ch sts, turn,

2nd row: catch back into the 4th st, forming 1 p, * skip 3 sts, 1 d c, 1 p, 1 d c, 1 p, 1 d c, all into the same st, 2 ch sts, skip 3 sts, 1 s c, 5 ch sts, catch back into the 4th st forming 1 p, repeat *, for this row.

It is a matter of choice if one repeats this lace for the opposite end or merely makes a hem.

Towel No. 2, shows the fork with dainty sprays of flowers all around it. For this, the predominating shade is green, that cool, restful shade, which is always so pleasing.

Two shades of green and two shades of pink were used. For the flowers, French knots with straight lines of outlining stitches were used. The hem was finished with a row of long and short buttonhole stitches made far apart.

Towel No. 6, is a companion towel, showing the knife to match.

Towel No. 3, is bright in color and charming in effect. The word Dishes was outlined in bright red, as were the cups and saucers on each side. The circle of French knots around these and the small design on each cup was done in black. For the knots but three threads were used in the needle at once.

The crocheted edge is the same as on Towel No. 1.

Towel No. 4, is similar to Towel No. 1, in that it has China for its decoration. The outlines of these pieces are also of brown with the flowers of light blue with yellow centers and green leaves. For the edge, hem and start 1st row, as before, making * 5 s c, 3 ch sts, form 1 p, 1 s c, 1 p, 1 s c, 1 p, repeat * across both ends.

Towel No. 5, is the most simple of the six. Kitchen is outlined in dark blue, with the crocheted edge to match. For this make 1st row, same as for Towel No. 1.

2nd row: * 5 ch sts, skip 2 sts, 1 s c, repeat * for this row.

3rd row: * 6 ch sts, catch back into the 4th st, forming 1 p, 2 ch sts, 1 s c into center of loop of previous row, repeat *, completing the edge.

Note: Perforated stamping patterns can be had by sending us 12c for each Towel design. Stamping compound and directions are included.

Stamped on blue striped glass toweling @ 45c.

MADE WITH GREEN TOMATOES

Stuffed Green Tomatoes

One cup boiled rice, 1 cup broken bits of soft bread, 4 slices cooked bacon chopped fine, ½ small onion chopped with the inside of 6 green tomatoes.

Mix the rice, bread, bacon and tomatoes, season with salt, pepper 1 teaspoon sugar. Scald the tomato shells, and fill with the mixture. If not moist enough, use hot water or some broth. Bake ½ hour, and serve on a platter with a white sauce.

Green Tomato Omelet

One pint stewed green tomatoes, 2 tablespoons bread crumbs, ½ teaspoon salt, and pepper to suit taste. Stir in 3 well beaten eggs, and fry brown in a greased pan. Fold over, and serve immediately.

Stewed Green Tomatoes

Wash and slice 6 large green tomatoes, and 6 onions, take the seeds from 3 large peppers, either red or green, and slice the peppers. Put 4 tablespoons salad oil or butter in a saucepan, throw in the tomatoes, and stir a moment until they slightly browned; then add 1 pint stock or water, and cook slowly for 1 hour. Add 1 teaspoon salt, and they are ready to serve.

Green Tomatoes For Sauces and Pies

Use 1 lb. sugar per 1 lb. tomatoes, and 1 lemon per each 2 lbs. tomatoes. Slice the tomatoes, and cook 15 or 20 minutes. Pour off part of the water, add the sugar and the sliced lemon, and cook until the lemon is tender. Put in sterilized cans while hot, and seal at once with sterilized rubbers and covers.

For Green Tomato Pies

Use 5 bowls of sliced green tomatoes, 3 bowls of brown sugar, 3 bowls of sliced apples and 2 lemons sliced. Cook until the mixture begins to thicken, then pour into sterilized cans and seal with sterilized covers and rubbers. Add cinnamon when put into pies.

Green Tomato Jam

To 4 lb. green tomatoes chopped rather fine add the grated rind and juice of 5 lemons and 2 oz. green ginger root scraped and cut into very small pieces. Add just enough water to keep the fruit from sticking, and cook 1 hour. Then add 3 lb. sugar, and cook until thick, pour into sterilized cans and seal. This is delicious served with toast.—Mrs. F. W. Stillman, Union Co., N. J.

GREEN TOMATO MINCEMEAT

Two quarts green tomatoes, 1½ cups sorghum or other syrup, 1 lb. seeded raisins, ¼ cup citron, 1½ lb. chopped apples, ¾ cup chopped suet, 1 tablespoon salt, 1 cup cider, 2 teaspoons cinnamon, 1 teaspoon each of cloves and nutmeg.

Chop the tomatoes or run them thru the meat grinder, using the coarse blade; drain off the juice, cover with cold water, and let come to a boil, then cook for ½ hour, and drain thoroly. Repeat until the tomatoes have been boiled three times. Then add all the other ingredients, except the spices, stir well together, and cook until thick. When cold, stir in the spices thoroly pack into cans, and process 10 minutes to seal. —H. M.

ELDERBERRIES

Farm housekeepers who are ignoring the elderberry as a table fruit do not know how much they miss. It makes delicious pies, and no pie fruit that can be canned will receive a heartier greeting next winter. Try out one or two pies now, while the fruit is in season, and serve it also stewed and cold as you serve prunes. Canned elderberries have been a staple in our family pantry for forty years, and even peaches would be more sorely missed.

It may be worth while to say that altho seemingly sweet enough naturally they take a liberal amount of sugar to bring out the rich delicate flavor, either as sauce or pie; and when so treated they yield nothing of superiority to huckleberries or blueberries, which they suggest, but with a flavor of their own.—Charles H. Darlington.

MY CREED

I would be true, for there are those
who trust me;
I would be pure, for there are those
who care;
I would be strong, for there is much
to suffer,
I would be brave, for there is much
to dare.

I would be friend to all—the foe, the
friendless;
I would be giving and forget the
gift;
I would be humble, for I know my
weakness;
I would look up—and laugh—and
love—and live.

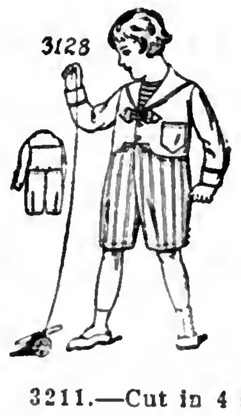
—Howard Arnold Walter.

PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

3128.—Cut in 4 sizes: 3, 4, 5 and 6 years. A 3-year size requires 3 yards of 27-inch material. The blouse could be of different material than that of the trouser's. Pattern, 10 cents.

3128



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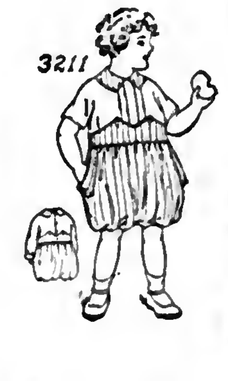
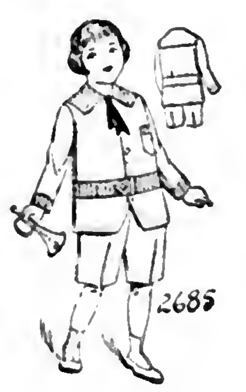


3211.—Cut in 4 sizes: 1, 2, 3 and 4 years. A 4-year size will require 3¼ yards of 36-inch material. The bodice may be omitted. Pattern, 10 cents.

2685.—The trousers are finished with side closing. The pattern is cut in 4 sizes: 3, 4, 5 and 7 years. Size 4 will require 3 yards of 44-inch material. Pattern, 10 cents.



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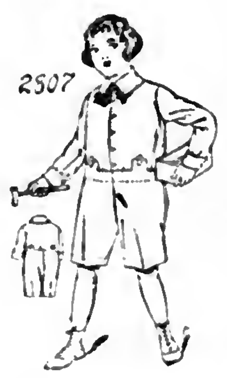

2507

2507.—This is a very comfortable suit, and the style is adaptable to all materials usually employed by boys suits. The sleeve may be in wrist or elbow length. The pattern is cut in 5 sizezs: 3, 4, 5, 6 and 8 years. Size 4 will require 2¼ yards of 40-inch material. Pattern, 10 cents.

The home bureau agent doesn't know it all, but she has been able to help a lot of women with their household problems.

If you have a Warm Air Furnace here is your chance to fill your coal bin at our expense

35 Tons of Coal to be given away

If your WARM AIR FURNACE is a Novelty and has been in use longer than any other NOVELTY WARM AIR FURNACE submitted in this contest there is a prize of 10 tons of Coal for you.

Or if your WARM AIR FURNACE is not a Novelty and has been in use longer than any other WARM AIR FURNACE brought to our attention before October 1st, you will get 5 tons of Coal.

Your chance to win is as good as your neighbor's. In the event of a tie each of the winners will receive the full amount of the prize.

A Mere Letter May be Good for Two Tons of Coal

Send us the name, number and age of your furnace. Look over your furnace while you are at it. Summer time is "Furnace fixing" time—and while you are working for your prize you may discover some little difficulty in your furnace that kept heat down and cost up—last winter.

Think of that. There are ten prizes of two tons of coal each to be given for the ten most interesting letters in which the contestants outline their experience with their WARM AIR FURNACES—regardless of make or age, or whether or not that experience has been favorable. Tell your own experience regardless. We are proud of the hundreds of thousands of Novelty furnaces in use—we want to know something about them—how long they have been in use—what kind of service they have been giving—where they are—who has them. If your furnace is not a Novelty, tell us about it anyway. We may be able to help you to greater heating economy. So today—tell us how old your furnace is—or write a letter of your experience.

The contest closes October 1st. Don't miss this chance to get next winter's coal FREE—coal from your own dealer—and the coal best suited to your needs.

Address Replies to Contest Director F

ABRAM COX STOVE COMPANY
AMERICAN & DAUPHIN STREETS
PHILADELPHIA, PA.

Makers of Novelty Water, Steam and Vapor Boilers, Warm Air Pipe and Pipeleless furnaces. Coal and Combination Ranges, Laundry Stoves and Hot Water Supply Boilers, Fortune Gas Ranges and Gas Water Heaters

Add Value to Your Home

The most beautiful modern homes are now decorated with metal ceilings. Fireproof, clean, sanitary, indestructible. Can always be renewed with a coat of paint.

"Penco" Metal Ceilings

are dust proof and air tight. The only ceiling with countersunk joints. Are easy to install. Placed over plaster or lathers. Shipped cut to fit any room, ready to put up; painted both sides with primer.

Send drawing with sizes of ceiling

We will mail prices, suggestions, instructions and valuable illustrated art book, showing beautiful designs in "Penco" Metal Ceilings, from simple effects for dwellings to the most elaborate ornamentation for Churches, Schools, Halls and Stores.

Delivery prepaid to nearest R. R. Station. Shipments made promptly.

PENN METAL CO., Ltd.
Manufacturers of Sheet Iron, Steel and Hampton Metal Building Material "Penco" Metal Ceilings.
Office & Factory, 2500-50 Wharton St.
Philadelphia, Pa.

SAVE SUGAR

by drying this summer's crop. U. S. Cook-Stove Drier dries all kinds of fruit, berries and vegetables. Indorsed by the Agricultural Dept. of the U. S. Government, which is using them for training in home economics and conservation of Foods. Guaranteed to give satisfaction. Write for Circulars and further information. Agents Wanted.

AMERICAN EVAPORATOR CO.
Box PF Waynesboro, Pa., U. S. A.

SEND NO MONEY ONLY $4.79

Pay Mailman When Skirt is Delivered

Just send us your name and address and we will send you this Wonderful Venetian Bridge Brand Skirt—all charges prepaid. You pay mailman our low special price on arrival.

SATISFACTION GUARANTEED

Ladies, this is positively one of the best values we have ever offered. This wonderful lustrous Venetian Bridge Brand Skirt looks like rich, heavy satin, but wears much better. Made with loose belt and gathered underneath. Has two fancy pockets ornamented with buckles and ball buttons. A very exceptional value—a skirt of the very latest style—unusually dressy and will give lasting service. We recommend this skirt to you and guarantee it. Color—Black only. Sizes—23 to 33—Waist 36 to 42 length. Only $4.79. 33 to 40 waist, 50c additional. Order by No. 227-B 62. Send for Big Free Bargain Catalog.

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"EARN PIN MONEY at HOME"

by crocheting or knitting Bootees, Sacques, Ladies' Vests and Shawls. Steady work. We pay parcel-post charges both ways.

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134th Street and 3rd Avenue, New York City

Special Subscription Offer

We will extend your subscription the balance of this year and all of next, or to Jan. 1, 1922 for 75c. The balance of this year and 2 years for $1.25; the balance of this year and 5 years for $2.25.

PENNSYLVANIA FARMER, 261 South Third Street, Philadelphia, Pa.

SAVAGE

The .250-3000 Savage Bolt-Action Model 1920

HERE IT IS!

THE rifle you have always wanted—A Savage Bolt Action. It is the handiest, daintiest, most perfectly modelled little shootiug-iron that a gun-crank ever got his hands on.

And it is the strongest, simplest, most dependable weapon that an explorer ever took onto an Arctic ice-floe or into a tropical jungle. And it only weighs six pounds. There's nothing patched-up about it—nothing renovated, or adapted or compromised. It isn't a cut-down musket or a war-baby reborn.

IT IS A BRAND NEW HUNTING-RIFLE—newly designed from muzzle to butt-plate—built symmetrically around the wonderfully effective cartridge it shoots, and combining every desirable feature of the best military rifles with the special refinements which the hunter needs.

Its action is the simple military bolt—but re-dimensioned and improved. It has bigger, stronger locking-lugs than the Service rifle. It has a shotgun type safety located on top of the tang—the natural, convenient place. The patented magazine design makes it possible to use soft nose, Spitzer point bullets without danger of deforming the points.

The great popularity and success of the .250-3000 Savage determined the cartridge for which this rifle should be designed This cartridge is loaded with an 87 grain Spitzer point, soft nose bullet 300) feet a second, accurately enough to make possibles on the 800 yard target and hard enough to penetrate ⅝ inch boiler plate.

SPECIFICATIONS

22 inch tapered high pressure steel barrel with integral front sight base, checked pistol grip stock and fore-stock, pistol grip capped, oil finished one piece stock, corrugated trigger, corrugated steel shotgun butt-plate, white metal front and flat top sporting rear sights, magazine capacity five cartridges, weight 6 pounds.

SAVAGE ARMS CORPORATION

Sharon, Pa. UTICA, N. Y Chicopee Falls, Mass.

Executive and Export Offices, 50 Church Street, New York City

Owners and Operators of

J. STEVENS ARMS CO.

Chicopee Falls, Mass.

R&B Co

SAVE on fuel; save on labor; save on materials. Knowing the comfort of Richardson & Boynton Co. warmth you can defy the coldest winter. Install a Richardson One Pipe Heater, which sends warmth to every room from a single register and requires no pipes or no cutting up of the house, no matter what its construction may be. Remember that the design of the

RICHARDSON ONE PIPE HEATER

gives such ample cold air space around the hot air chamber of the heater that the cellar is kept at the proper low temperature for vegetables. The direction of the arrows in the accompanying pictures illustrates the method of taking the cold air from the house and sending it back again in a stream of warmth to every room.

Send us a description of your house and we will supply you with full particulars of this famous heater. Ask for Booklet E

Richardson & Boynton Co.

Established 1837

258-260 FIFTH AVE., NEW YORK

Boston Chicago Philadelphia Rochester Providence

Richardson ONE PIPE HEATER

POULTRY

SEPTEMBER POULTRY HINTS

PART I

It pays to slip a band on each cockerel sold for breeding purposes. This gives the customer a way of distinguishing his new purchase from the growing cockerels in the home flock. Farmers do not usually have a box of leg bands at hand and they appreciate having the new birds definitely marked.

* * *

There are not many farm products on which the producer can set the price. But it can be done on fine quality hatching eggs and on fresh infertile eggs that are graded and sold for eating purposes. That is one thing that we like about poultry on the farm. We know something about our production costs and have plenty of nerve in telling a private customer about it when he is purchasing an order of eggs to preserve in water glass.

* * *

Hens seldom have scaly leg if they are housed in well ventilated coops and the roosts are frequently sprayed with one of the coal-tar disinfectants. The scaly legs trouble is caused by a parasite and when the pest is lacking the hen's legs will be clean and smooth. Cull out the rough legged hens and keep the house sanitary and soon the trouble will be unknown in the flock.

* * *

Farmers are urged not to change breeds of poultry often and it is good advice. But sometimes a breeder becomes a little tired of the ceaseless care of managing the same old kind of hens year in and year out. In such cases the buying of foundation stock of another breed may help to stimulate enthusiasm for the business and lead to better management. And often the poultryman who tried out another breed is glad to return to his "first love" and stick to it until he has flocks that are very profitable.

* * *

Lack of protection from thieves keeps some farmers from developing flocks of standard-bred poultry. The first time that birds are stolen they become discouraged and then keep a few mongrel fowls for the home egg supply and do not worry about them. In some sections poultry stealing is too prevalent and thieves that are caught are too lightly handled. If any poultry owners happen to be running for office in the township it is not a bad plan to give them a vote if they are otherwise all right. Possibly they have learned to like high class poultry and will be the sort of officers who will hand the limit of the law to poultry thieves.

* * *

Late hatched chicks are a discouraging crop if they cannot be fenced away from the old stock and the early hatched birds which have made a large growth. The heavy birds walk all over the late chicks and they may become stunted and entirely without prospects as profit winners.

* * *

With the oat crop good and prospects of a lowering price it will pay to use more soaked or boiled oats in the ration of both the growing poultry and the laying hens. We place the oats in galvanized pails at night and then pump the pails full of water. The next morning the oats have swelled and seem much more appetizing to the hens than dry oats.

* * *

It is true that some of the American breeds seem better winter layers than the Leghorns which may produce more eggs. If poultry keeping is a real business, the value of the eggs laid should be of more importance than the number of eggs. A vigorous strain of winter layers is a great help in making poultry profitable on the farm. Of course it takes feed and care to produce the eggs but feed and care are needed just to keep the hens alive and in healthful condition until spring. Why not obtain plenty of eggs from the hens that are not needed for breeding purposes in the spring.—R. G. Kirby.

LATE HATCHED COCKERELS

We believe that the late hatched cockerels should all be used for broilers and roasters unless they are of unusual value because of their pedigree. The late hatched males do not have the chance to develop that is possible with early hatched stock. They do not seem to have the size and vigor even with the best of care. Cockerels make the best breeders when they have reached full maturity and for this reason the bird with a long season in which to grow is much better as a breeder than the late hatched cockerel which may be undersized and lacking in maturity.

It is nearly always possible for the poultry breeder to obtain some early hatched stock and the cockerels for future breeders should be selected from these early hatches. We believe that the breeding stock have a little more vigor early in the season and for this reason the early eggs are apt to turn out the most vigorous chicks. Chicks of that kind grow into the best breeders. They have the advantage of the long growing season and plenty of bugs and tender bits of green food. The late hatched cockerels miss the fine feeding conditions of early spring when everything is conducive to rapid development of bird life.

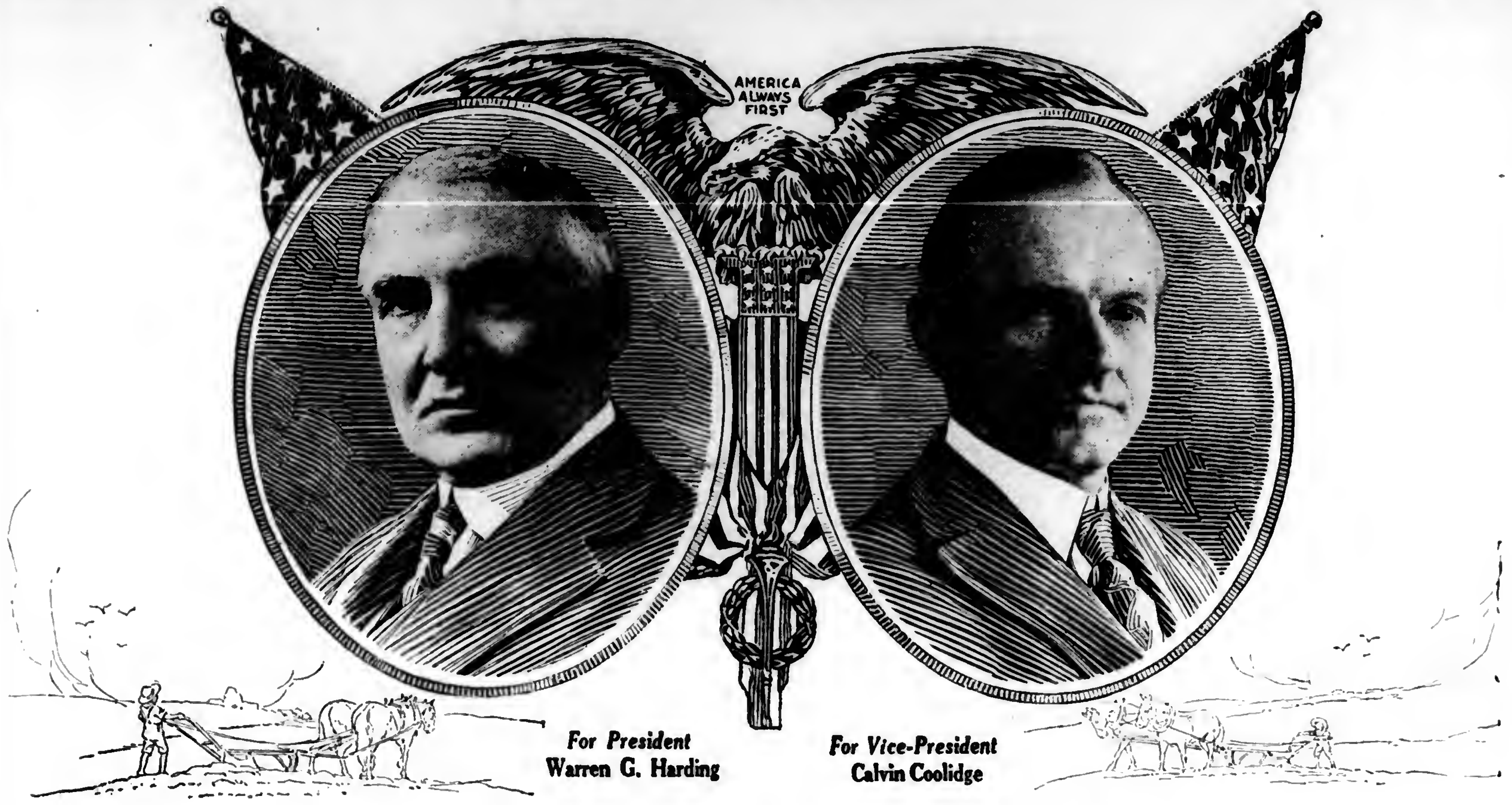
The late hatched cockerels are usually the most profitable when sold as broilers. After reaching that age their appetites rapidly increase and it costs money to feed a flock of them. It is more satisfactory to cash in on the crop, stop the expense and have the feed and the range for the growing pullets or the early hatched cockerels which are being saved for next season's breeding operations.—R. G. Kirby.

LESSONS IN UNNATURAL HISTORY

By Eliot K. Stone

THE FIRE DOGS

Behold the sturdy Fire-dogs
Uphold the brightly burning logs.
They do not seem to mind the heat.
Tho I should think t'would burn their
feet.
And tho I think they'd like to pant
They have no tongue, and, so they
can't.
They are most cheerful company
Upon a cold day, as you see.
—Everyland.



For President
Warren G. Harding

For Vice-President
Calvin Coolidge

The Republican Party and the Farmer

To the Farmers of the Country:

Next November you will join with all other good citizens in choosing a president of the United States for the four years beginning March 4, 1921.

You must choose either Warren G. Harding, the Republican nominee, or Gov. Cox, the Democratic nominee. There is no third choice. One or the other of these two men will be elected. The affairs of the nation during the next four years will be directed either by a Republican or by a Democratic administration.

Which will best serve your interests, both as a citizen and as a farmer?

Let us look at it for a moment from the purely farm standpoint.

Your experience of the past seven years, and especially during the past three years, tells you what you may fairly expect from a Democratic administration.

Your industry, the greatest in the nation, was singled out as the target for a price fixing policy which has limited the prices of the things you had to sell while leaving you exposed to the exactions of profiteers in practically every other line of production, distribution and speculation.

You have been told what you could receive for your staple products, either directly or indirectly; you have been subjected to restraints as to shipping, and all sorts of exactions and annoyances.

But there has been no limit placed upon what others might charge you for the things you have had to buy.

The result of this unwise, unsympathetic policy, while discouraging and harmful to the farm producer, has not helped the consumer. On the contrary, it has made conditions worse for him, because it has tended to curtail production and at the same time has stimulated speculation and profiteering.

The Republicans party is not a class or sectional party; its policies are intended to upbuild the entire nation. But it believes that it is essential to the welfare of all our people that the farmer, whose industry is the very foundation of our national prosperity, should have his fair share of the wealth which his labor and enterprise creates. It believes that if our agriculture is to be maintained the farmer must have an absolutely square deal.

The Republican party therefore, by its platform and by the utterances of its candidates, is pledged to a thoroughly sympathetic, practical, helpful attitude toward American agriculture. It promises a well thought out, constructive program which will help make farming more profitable and therefore make our farms more productive.

In contrast with this helpful attitude of the Republicans the Democratic party offers no protection to the American farmer against the cheap farm products of foreign lands; on the contrary, it re-affirms its tariff-for-revenue-only policy which throws the American market wide open to the dairy products, grains and meats produced on the cheap land and by cheap labor of foreign countries. It promises no relief from the price-fixing and price drive policies which have cost the farmers hundreds of millions of dollars during the past two years and have helped no one but the speculator and the profiteer. Nor does it even recognize the existence of the violent fluctuations in the prices of farm products—more violent and unreasonable during the past three years than ever before in our history—which have caused you such heavy and unnecessary losses.

Pledges of the Republican Party

Here are the formal pledges of the Republican party as set forth in the agricultural plank of the national platform. Read them carefully, for they are of vital interest to you.

Practical and adequate farm representation in the appointment of governmental officials and commissions.

The right to form co-operative associations for marketing their products, and protection against discrimination.

The scientific study of agricultural prices and farm production costs at home and abroad, with a view to reducing the frequency of abnormal fluctuations, and the uncensored publication of such reports.

The authorization of associations for the extension of personal credit.

A national inquiry on the co-ordination of rail, water and motor transportation, with adequate facilities for receiving, handling and marketing food.

The encouragement of our export trade.

An end to unnecessary price fixing and ill-considered efforts arbitrarily to reduce prices of farm products, which invariably result to the disadvantage both of producer and consumer.

The encouragement of the production and importation of fertilizing material and for its extended use.

The extension of the federal farm loan act so as to help farmers to become farm owners and thus reduce the evils of farm tenantry, and also to furnish such long-time credit as farmers need to finance adequately their larger and long-time production operations.

Revision of the tariff as necessary for the preservation of a home market for American labor, agriculture and industries. (Note that the pledge to the farmer is just as specific as to labor and capital.)

Harding's Endorsement

Senator Warren G. Harding, the Republican nominee, in his speech of acceptance took advanced ground on behalf of agriculture. He said:

"I hold that farmers should not only be permitted but encouraged to join in co-operative associations to reap the just measure of reward merited by their arduous toil.

"Our platform is an earnest pledge of renewed concern for agriculture, and we pledge effective expression in law and practice. We will hail that co-operation which will make profitable and desirable the ownership and operation of small farms and which will facilitate the marketing of farm products without the lamentable waste which exists under present conditions.

"A Republican administration will be committed to a renewed regard for agriculture and seek the participation of farmers in curing the ills justly complained of and aim to place the American farm where it ought to be—highly ranked in American activities and fully sharing the highest good fortune of American life.

"Becoming associated with this subject are the policies of irrigation and reclamation so essential to agricultural expansion, and the continued development of the great and wonderful west."

Mr. Harding pledges federal co-operation with state governments in building and improving farms-to-market roads rather than national highways, to cheapen and facilitate the quick shipment of crops.

Send for a free copy of Senator Harding's address in which he discusses at length present day problems of the farmer.

REPUBLICAN NATIONAL COMMITTEE, Auditorium Hotel, Chicago

(Advertisement)

Republican National Committee,
Auditorium Hotel, Chicago, Ill.

Please send me, free and postpaid, copy of Senator Harding's Address on the present day problems of the farmer.

Name ....
Address ....

Whispering Smith

by Frank H. Spearman

CHAPTER XXVIII

The Sunday Murder

(Continued from Last Week.)

Banks's posse, leaving Medicine Bend before daybreak, headed northwest. Their instructions were explicit; to scatter after crossing the Frenchman, watch the trails from the Goose River country and thru the Mission Mountains, and intercept everybody riding north until the posse from Sleepy Cat or Whispering Smith should communicate with them from the southwest. Nine men rode in the party that crossed the Crawling Stone Sunday morning at sunrise with Ed Banks.

After leaving the river the three white-capped Saddles of the Mission range afford a landmark for more than a hundred miles, and toward these the party pressed steadily all day. The southern pass of the Missions opens on the north slope of the range into a pretty valley known as Mission Springs Valley, and the springs are the head-waters of Deep Creek. The posse did not quite obey the instructions, and following a natural instinct of safety five of them, after Banks and his three deputies had scattered, bunched again, and at dark crossed Deep Creek at some distance below the springs. It was afterward known that these five men had been seen entering the valley from the east at sundown just as four of the men they wanted rode down South Mission Pass toward the springs. That they knew they would soon be cut off, or must cut their way thru the line which Ed Banks, ahead of them, was posting at every gateway to Williams Cache, was probably clear to them. Four men rode that evening from Tower W thru the south pass; the fifth man had already left the party. The four men were headed for Williams Cache and had reason to believe, until they sighted Banks's men, that their path was open.

They halted to take counsel on the suspicious-looking posse far below them, and while their cruelly exhausted horses rested, Du Sang, always in Sinclair's absence the brains of the gang, planned the escape over Deep Creek at Baggs's crossing. At dusk they divided; two men lurking in the brush along the creek rode as close as they could, unobserved, toward the crossing, while Du Sang and the cowboy Karg, known as Flat Nose, rode down to Baggs's ranch at the foot of the pass.

At that point Dan Baggs, an old locomotive engineer, had taken a homestead, got together a little bunch of cattle, and was living alone with his son, a boy of ten years. It was a hard country and too close to Williams Cache for comfort, but Dan got on with everybody because the toughest man in the Cache country could get a meal, a feed for his horse, and a place to sleep at Baggs's, without charge, when he needed it.

Ed Banks, by hard riding, got to the crossing at five o'clock, and told Baggs of the hold-up and the shooting of Oliver Sollers. The news stirred the old engineman, and his excitement threw him off his guard. Banks rode straight on for the middle pass, leaving word that two of his men would be along within half an hour to watch the pass and the ranch crossing, and asking Baggs to put up some kind of a fight for the crossing until more of the posse came up—at the least, to make sure that nobody got any fresh horses.

The boy was cooking supper in the kitchen, and Baggs had done his milking and gone back to the corral, when two men rode around the corner of the barn and asked if they could get something to eat. Poor Baggs sold his life in six words: "Why, yes; be you Banks's men?"

Du Sang answered: "No; we're from Sheriff Coon's office at Oroville, looking up a bunch of Duck Bar steers that's been run somewhere up Deep Creek. Can we stay here all night?"

They dismounted and disarmed Baggs's suspicions, tho the condition of their horses might have warned him had he had his senses. The unfortunate man had probably fixed it in his mind that a ride from Tower W to Deep Creek in sixteen hours was a physical impossibility.

"Stay here? Sure! I want you to stay," said Baggs bluffy. "Looks to me like I seen you down at Crawling Stone, ain't I?" he asked of Karg.

Karg was lighting a cigarette. "I use to mark at the Dunning ranch," he answered, throwing away his match.

"That's hit. Good! The boy's cooking supper. Step up to the kitchen and tell him to cut ham for four more."

"Four?"

"Two of Ed Banks's men will be here by six o'clock. Heard about the hold-up? They stopped Number Three at Tower W last night and shot Ollie Sollers, as white a boy as ever pulled a throttle. Boys, a man that'll kill a locomotive engineer is worse'n an Indian; I'd help skin him."

"The hell you would!" cried Du Sang. "Well, don't you want to start in on me? I killed Sollers. Look at me; ain't I handsome? What you going to do about it?"

Before Baggs could think Du Sang was shooting him down. It was wanton. Du Sang stood in no need of the butchery; the escape could have been made without it. His victim had pulled an engine throttle too long to show the white feather, but he was dying by the time he had dragged a revolver from his pocket. Du Sang did the killing alone. At least, Flat Nose, who alone saw all of the murder, afterward maintained that he did not draw because he had no occasion to, and that Baggs was dead before he, Karg, had finished his cigarette. With his right arm broken and two bullets thru his chest, Baggs fell on his face. That, however, did not check his murderer. Rising to his knees, Baggs begged for his life. "For God's sake! I'm helpless, gentlemen! I'm helpless. Don't kill me like a dog!" But Du Sang, emptying his pistol, threw his rifle to his shoulder and sent bullet after bullet crashing thru the shapeless form writhing and twitching before him until he had beaten it in the dust soft and flat and still.

Banks's men came up within an hour to find the ranch-house deserted. They saw a lantern in the yard below, and near the corral gate they found the little boy in the darkness, screaming beside his father's body. The sheriff's men carried the old engineman to the house; others of the posse crossed the creek during the evening, and at eleven o'clock Whispering Smith rode down from the south pass to find that four of the men they were after had taken fresh horses, after killing Baggs, and passed safely thru the cordon Banks had drawn around the pass and along Deep Creek. Bill Dancing, who had ridden with Banks's men, was at the house when Whispering Smith arrived. He found some supper in the kitchen, and the tired man and the giant ate together.

Whispering Smith was too experienced a campaigner to complain. His party had struck a trail fifty miles north of Sleep Cat and followed it to the Missions. He knew now who he was after, and knew that they were bottled up in the Cache for the night. The sheriff's men were sleeping on the floor of the living-room when Smith came in from the kitchen. He sat down before the fire. At intervals sobs came from the bedroom where the body lay, and after listening a moment, Whispering Smith got stiffly up, and, tiptoeing to still the jingle of his spurs, took the candle from the table, pushed aside the curtain, and entered the bedroom.

The little boy was lying on his face, with his arm around his father's neck, talking to him. Whispering Smith bent a moment over the bed, and, setting the candle on the table, put his hand on the boy's shoulder. He disengaged the hand from the cold neck, and sitting down took it in his own. Talking low to the little fellow, he got his attention after much patient effort and got him to speak. He made him, tho struggling with terror, to understand that he had come to be his friend, and after the child had sobbed his grief into a strange heart he ceased to tremble, and told his name and his story, and described the two horsemen and the horses they had left. Smith listened quietly. "Have you had any supper, Dannie? No? You must have something to eat. Can't you eat anything? But there is a nice pan of fresh milk in the kitchen.

A burst of tears interrupted him. "Daddie just brought in the milk, and I was frying the ham, and I heard them shooting."

"See how he took care of you till the last minute, and left something for you after he was gone. Suppose he could speak now, don't you think he would want you to do as I say? I am your next friend now, for you are going to be a railroad man and have a big engine."

Dannie looked up. "Dad wasn't afraid of those men."

"Wasn't he, Dannie?"

"He said we would be all right and not to be afraid."

"Did he?"

"He said Whispering Smith was coming."

"My poor boy."

"He is coming, don't be afraid. Do you know Whispering Smith? He is coming. The men to-night all said he was coming."

The little fellow for a long time could not be coaxed away from his father, but his companion at length got him to the kitchen. When they came back to the bedroom the strange man was talking to him once more about his father. "We must try to think how he would like things done now, mustn't we? All of us felt so bad when we rode in and had so much to do we couldn't attend to taking care of your father. Did you know there are two men out at the crossing now, guarding it with rifles? But if you and I keep real quiet we can do something for him while the men are asleep; they have to ride all day tomorrow. We must wash his face and hands, don't you think so? And brush his hair and his beard. If you could just find the basin and some water and a towel—you couldn't find a brush, could you? Could you, honestly? Well! I call that a good boy—we shall have to have you on the railroad, sure. We must try to find some fresh clothes—these are cut and stained; then I will change his clothes, and we shall all feel better. Don't disturb the men; they are tired."

They worked together by the candle-light. When they had done, the boy had a violent crying spell, but Whispering Smith got him to lie down beside him on a blanket spread on the floor, where Smith got his back against the sod wall and took the boy's head in his arm. He waited patiently for the boy to go to sleep, but Dan was afraid the murderers would come back. Once he lifted his head in a confidence. "Did you know my daddy used to run an engine?"

"No, I did not; but in the morning you must tell me all about it."

Whenever there was a noise in the next room the child roused. After some time a new voice was heard; Kennedy had come and was asking questions. "Wake up here, somebody! Where is Whispering Smith?"

Dancing answered: 'He's right there in the bedroom, Farrell, staying with the boy."

There was some stirring. Kennedy talked a little and at length stretched himself on the floor. When all was still again, Dannie's hand crept slowly from the breast of his companion up to his chin, and the little hand, feeling softly every feature, stole over the strange face.

"What is it, Dannie?"

"Are you Whispering Smith?"

"Yes, Dannie. Shut your eyes."

At three o'clock when Kennedy lighted a candle and looked in, Smith was sitting with his back against the wall. The boy lay on his arm. Both were fast asleep. On the bed the dead man lay with a handkerchief over his face.

CHAPTER XXIX

Williams Cache

Ed Banks had been recalled before daybreak from the middle pass. Two of the men wanted were now known to have crossed the creek, which meant they must work out of the country thru Williams Cache.

"If you will take your best two men, Ed," said Whispering Smith, sitting down with Banks at breakfast, "and strike straight for Canadian Pass to help Gene and Bob Johnson, I'll undertake to ride in to Rebstock while Kennedy and Bob Scott watch Deep Creek. The boy gives a good description, and the two men that did the job here are Du Sang and Flat Nose. Did I tell you how we picked up the trail yesterday? Magpies. They shot a scrub horse that gave out on them and skinned the brand. It hastened the banquet, but we got there before the birds were all seated. Great luck, wasn't it? And it gave us a beautiful trail. One of the party crossed the Goose River at American Fork, and Brill Young and Reed followed him. Four came thru the Mission Mountains; that is a cinch and they are in the Cache—and if they get out of it is our fault personally, Ed, and not the Lord's."

Williams Cache lies in the form of a great horn, with a narrow entrance at the lower end known as the Door, and a rock fissure at the upper end leading into Canadian Pass; but this fissure is so narrow that a man with a rifle could withstand a regiment. For a hundred miles east and west rise the granite walls of the Mission range, broken nowhere save by the information known as the Cache. Even this does not penetrate the range; it is a pocket, and runs not over half-way into it and out again. But no man really knows the Cache; the most that may be said is that the main valley is known, and it is known as the roughest mountain fissure between the Spanish Sinks and Cache lies between walls two thousand feet high, and within it is a small labyrinth of canyons. A generation ago, when Medicine Bend for one winter was the terminus of the overland railroad, vigilantes mercilessly cleaned out the town, and the few outlaws that escaped the shotgun and the noose at Medicine Bend found refuge in a far-away and unknown mountain gorge once named by French trappers the Cache. Years after these outcasts had come to infest it came one desperado more ferocious than all that had gone before. He made a frontier retreat of the Cache, and left to it the legacy of his evil name, Williams. Since his day it has served, as it served before, for the haunt of outlawed men. No honest man lives in Williams Cache, and a few men of any sort live there long, since their lives are lives of violence; neither the law nor a woman crosses Deep Creek. But from the day of Williams to this day the Cache has had its ruler, and when Whispering Smith rode with a little party thru the Door into the Cache the morning after the murder in Mission Valley he sent an envoy to Rebstock, whose success as a cattle-thief had brought its inevitable penalty. It had made Rebstock a man of consequence and of property and a man subject to the anxieties and annoyances of such responsibility.

Sitting once in the Three Horses at Medicine Bend, Rebstock had talked with Whispering Smith. "I used to have a good time," he growled. "When I was rustling a little bunch of steers, just a small bunch all by myself, and hadn't a cent in the world, no place to sleep and nothing to eat, I had a good time. Now I have to keep my money in the bank; that ain't pleasant—you know that. Every man that brings a bunch of cattle across Deep Creek has stole em, and expects me to buy 'em or lend him money. I'm busy with inspectors all the time, deviling with brands, standing off the Stock Association and all kinds of trouble."

(Continued Next Week.)

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Markets

PHILADELPHIA PRODUCE

—Sept. 7, 1920.

The supplies of potatoes have been fully ample, if not a little heavier than the markets requirements at the prices that have been prevailing, and prices have been gradually seeking lower levels. In addition to liberal supplies from New Jersey, there are still quite a lot of Eastern Shore potatoes coming forward every day, besides supplies from the Pennsylvania farmers. The New Jersey long stock or Giants are selling at $2.40@2.60 per 150-lb. bag, with the round potatoes or Cobblers bringing $3@3.25 per 150 pound sack. The Pennsylvania potatoes are being shipped mostly in bulk and sell mostly at $2 per cwt. with some up to $2.20 per cwt. The Eastern Shore stock in barrels are selling at $2.75@3.25 per barrel, with culls at $1.25@1.50. Potatoes hauled in by nearby farmers sell at 75@90c per ⅝ basket with No. 2s at 35@60c per basket.

Sweet potatoes up until today have been ruling high, but today under increased supplies both from the Eastern Shore and near N. J. points, the market weakened and prices declined considerably, the Eastern Shores selling at $4.50@5.50 per barrel for No. 1s, with No. 2s at $2.25@2.50. The New Jerseys sold mostly at $1.50 per ⅝ basket with a few at $1.60@1.65, and No. 2s at 60@90c per ⅝ basket.

Veegtables.—The market on fancy green beans is ruling firm at $1@1.25 per ⅝-basket, but most beans are of poor quality and such are selling at 50@85c per basket. Beets are in light supply and firmer at 2@3c per bunch. Good cabbage is doing better and selling up to 35@40c per ⅝-basket, with poor and light heads at 15@25c per basket. Carrots are a little more plentiful, but fancy are ruling firm, with prices ranging from 60@75c per ⅝-basket and 3@3½c per bch. Cauliflower was quite plentiful today and prices are lower, ranging from 75c@$1.50 per crate. Celery is showing practically no change with supplies about equal to demand. Best large bunches are ranging from 50@75c per bunch and smaller sizes at 25@50c per bunch. Celery hearts from the nearby farmers are bringing 4@7c per bch. Corn is meeting a good demand, but as there is a wide range in quality prices are taking the wide range of 40@75c per ⅝-basket and $1.25@2.50 per 100 ears, the best corn now coming from Penna. farmers. Most cucumbers on the market are coming from New York state and as they were in free supply today, prices were lower, ranging from 75c@$1.50 **per bushel, with** the dill pickles at $1.75@2.50 per bushel, and the small pickles known as count pickles sold at $3@4 per bushel. Egg plant is about steady at 20@35c per ⅝-basket. Lettuce is scarce and bringing high prices, three cars from N. Y. state selling this morning at $2.25@3.50 per box of two dozen heads. Lima beans are in light supply and prices have been gradually advancing. This morning N. J. Lima beans sold at $1.40@2 per ⅝-bskt. and hampers from Md., Del., and N. J. points sold at $1.75@2.75 per hamper. The market is showing improvement on good onions, and best N. J. sold here this morning at 75@85c per ⅝-basket, with poorer grades at 50@70c per ⅝ basket. Some N. Y. state onions sold at $2@2.40 per 100-lb. sacks. White onions are moving slowly at $1@1.50 per hamper for the No. 1 onions, while the small stewers and picklers sold at $2@2.50 per hamper. Okra was also firmer at 60c@$1.25 per ⅝ basket. Parsley remains practically unchanged at $1@1.50 per hamper. Peppers are moving out at 40@60c per ⅝-basket for green peppers while the red peppers sold at 75c@$1.15 per ⅝-basket as to variety, the red tomato peppers bringing the top prices. Romaine is scarce and selling at $2@2.50 per box. Squash is in light supply, but demand is moderate at 20@35c per ⅝-basket. Tomatoes are againn very plentiful and the low price of 20@50c per ⅝-basket prevails on most offerings, with very best up to 75c per basket. The yellow egg tomatoes remain practically unchanged from day to day, selling mostly around 65@75c per ⅝-basket. Turnips are in light supply, but demand has been limited at 25@60c per ⅝-basket. There is some demand for dried beans at $7.25@11.50 per cwt., as to quality, the fancy marrow beans bringing top figures and the small pea beans the lower range of prices.

Fruits.—The market is being amply supplied with nearby N. J. apples to the detriment of offerings from outside points, and prices are inclined to be rather low. Good Wealthy, Maiden Blush and Gravenstines are selling at 60c@$1 per ⅝-basket, with culls and No. 2s at 15@50c as to quality.

There was a car of New York State apples here this morning which sold at $1@1.10 per bushel for Gravensteins and $1.25@1.35 per bushel for Maiden Blush and $1.15 per bushel for Duchess. Pears from N. Y. state are meeting a ready market at about the following prices: Bartletts, No. 1s, $2.25@2.75 per bushel and $7.50@8 per barrel; Bartletts No. 2s $1.25@1.75 per bushel and $4.50@6 per barrel; Clapp Favorite, No. 1s, $1.75@2.75 per bushel and $7.50 per barrel; Seckels, $2.50 per bushel.

Poultry.—There was a sharp advance noted in the market on live poultry this morning. Supplies have been light and the market has been cleaning up all offerings promptly from day to day. At this writing the market is ruling firm at about the following range: Heavy fowls, 40@42c per pound; light to medium fowls, 36@38c; leghorn fowls, 32@34c; roosters, 24@25c; spring chickens weighing 2½ to 3 pounds each, 38@40c; broiling chickens, not leghorns, 34@38c, with leghorn broiling chickens at 32@34c; ducks remain firm at the practically unchanged price of 30@33c per pound.

Eggs.—There has been an advance in the egg market since our last week's report. Strictly fine eggs are in light supply and such are ruling firm and commanding quick sales at outside prices. Penna. and other nearby current receipts 56c; nearby firsts, 57@59c, with ordinary to fair stock as 50@54c. Strictly fancy candled and selected eggs are jobbing at 68@69c per dozen. Western egg are bringing 55@56c for firsts with the extra firsts at 57@59c per dozen.

LANCASTER PRODUCE

—Sept. 7, 1920.

Grapes, peaches, and potatoes were offered in enormous quantities at the markets here today which were so largely attended by farmers that the public has asked for official relief from the congestion. The markets have grown so during the past month, that special fire protection rulings have been issued by the city. Prices showed little change today, and demand for everything was heavy.

Butter and Eggs.—Country butter, 68@75c lb; creamery butter, 70@75c. Fresh eggs, 62@65c per dozen.

Poultry.—Dressed fowls, $1.25@2 each; broilers, 75c@$1 each; squabs, 30@50c each.

Vegetables.—Beans, 15@20c ½ pk.; lima beans, 20@25c quart; beets, 5c bunch; cabbage, 5@10c head; cauliflower, 10@25c hd.; corn, 15@25c dozen; celery, 10@15c stalk; eggplant, 15@20c bskt; lettuce, 15@20c head; peas, 40@50c ½ pk.; potatoes, 30@35c ½ pk.; do., $1.50@2 bu.; sweet potatoes, 40@50c ½ pk.; squashes, 5@10c each; spinach, 15c ½ pk; tomatoes, 10@15c ½ pk.; turnips, 40c ½ pk.

Fruits.—Apples, 20@30c ½ pk.; cantaloupes, 10@15c each; elderberries, 10c qt.; huckleberries, 35@40c qt.; pears, 20@30c ½ peck; peaches, $1.25@1.75 basket; watermelons, 25@50c each.

BALTIMORE PRODUCE

—Sept. 7, 1920.

Butter.—Creamery, Western Separator, extras, 57@58c; do., firsts, 56@57c; do., prints, ½ pound extras, 59@60c; do., firsts, 57@58c; do., 1 pound, extras, 59@60c; do., firsts, 57@58c; nearby creamery, extras, 48@50c; do., firsts, 46@47c; dairy prints, Md., Penn, and Va., extras, 38@40c; do., firsts, 36@37c; storepacked, 37@38c.

Eggs.—Western, Md., Penn. and nearby, firsts, 55c; Eastern Shore, Md., and Va., firsts, 55c; Western (Ohio), 54@55c.

Live Poultry.—Chickens, spring, large, 35c lb., do., small, 32@33c lb.; do., old roosters, 21@22c lb.; do., old hens, over 4 lbs., 36c lb.; do., small, 35c lb.; do., white Leghorn hens, 35c lb.; do., young white Leghorns, 1½ pounds, 33@34c lb.; do., under 1½ lbs., 32c lb. Ducks, Muscovy and Mongrel, old, 20@22c lb.; do., white Pekins, young, 30@32c lb.; do., Puddle 4 lbs., and over, 30c lb.; do., smaller, poor, 23@25c lb. Pigeons, old, pair, 35@40c; do., young pair, 35@40c. Guinea Fowl, young, 1½ pounds, each(60c; do., small 1@1¼ pounds each 40@50c.

PITTSBURGH PRODUCE

—Sept. 7, 1920.

The produce yards were open yesterday morning to handle consignments of produce but the loading on out-of-town shipments was light. Receipts on shipped stuff, however, were normal in most lines of the market. There were no auction sales on account of the holiday and the yards closed at noon. The wholesale houses along the street also closed at noon and trading in foodstuffs was quiet, there being little or no demands. There were practically no price changes made on the different commodities and quotations were the same as when the markets closed Saturday. The Pittsburgh Grain and Hay Exchange and the Pittsburgh Butter and Egg Exchange were closed and no receipts were bulletined.

NEW YORK PRODUCE

—Sept. 7, 1920.

Butter.—Receipts, 5,912 packages; creamery higher than extras, 58c; creamery, extras (92 score), 57c; creamery, firsts, (88 to 91 score), 51½@56¼c; packing stock, current make, No. 1, 41@41½c.

Eggs.—First; receipts, 13,078; fresh-gathered, extra firsts, 57@59c; fresh-gathered firsts, 54@57c; state, Pennsylvania and nearby western hennery whites, firsts to extras, 73@75c; state, Pennsylvania and nearby western hennery browns, extras, 64@68c; state, Pennsylvania and nearby gathered browns and mixed colors, firsts to extra, 54@62c.

Cheese.—Firm; receipts, 985; state whole milk, flats, current make, white and colored, specials, 28½@29c; do., average run, 27@28c; state, whole milk, twins, current make, specials, 27¾c; do., average run, 26½@27½c.

Live Poultry.—Steady, broilers, by freight, 34@38c; fowls, 34@37c.

Dressed Poultry.—Steady and unchanged.

Vegetables.—Potatoes, bbl., L. I., bbl., $1.25@3; Jersey, 165-lb., $3.50@4.50; Sweets, bskt, 1's, $1.25@3; Beans, bskt, Wax, 50c@$2.50; Green, 50c@$2.25; Beets, bbl., $2@2.50; Carrots, nby, 100, $1@2; Corn, Jy, 100, $1@2.50; Jy, bskt., $1@2; Celery, crt., State, bch., 15@90c; Jy, bch., 15@65c; Cucumbers, State, bskt., $1@1.50; Jy, bskt., 50c@$1.50; Cabbages, L. I., bbl., 50c@$1; Jy, bbl., 50c@$1; Cauliflowers, nby, bbl., State, crt., 75c@$2.50 Eggplants, Jy, box, 40@65c; Lima Beans, Jy, bskt., $1.25@2; Lettuce, State, crt., $1@2.25; nby, bbl., $1@2.50; Okra, Jy, crt., $2@3; Onions, state, Wh., bskt., $1@2; Yel., bskt., 75c@$1.25; Jersey Wh., bskt., $1@1.65; Yel., bskt., $1@1.50; Peppers, Green—bbl., $1@6; Peas, State, bskt., $1@6; Squash, Wh., bbl., $1@2.50; Yel., bbl., $1@2.50; Turnips, White, bbl., $1.50@3.50; Tomatoes, Up-Jersey box, 50c@$1.75; South Jersey, Acme, 50c@$1.25; Stone, $1@1.25; Grant, 50@75c.

Fresh Fruits.—Apples—Baskets, 50@$1.75; barrels, $3@5.50; boxes, $3.75@4. Pears, boxes, $3@3.50. Peaches, crate, Jy. Elbta, $2@2.75; Jy, Belle, $1.50@2; Jy, Cham., $1.50@2. Plums, S'n, bskt., 30@50c; state, bskt., 30@40c; 16-qt., bskt., $1.

PHILADELPHIA LIVESTOCK

—Sept. 4, 1920.

Receipts of the week ending Sept. 4th, 1920, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Totals for week	2,081	12,323	9,255
Previous week	2,010	6,256	8,448

Calves.—Receipts of calves were 2,052 head against 1,426 head previous week.

Beef Cattle.—Steers and cows firm. Bulls weaker. Calves barely steady. Quotations: Steers, good to choice, $16@16.50; fair to good, $13@15; common to fair, $11.50@13; cows, good to choice, 8½@10c; do., fair to good, 7@8½c; bulls, 7@9½c; calves, extra to choice, $20@21; fair to good, $18@19; common, $12@13; Tennessee, $17@18; other southerns, $8@13.

Sheep and Lambs.—Receipts more liberal and market quiet and unchanged. Quotations: Sheared sheep, wethers, extra, $9@9.50; do., good to choice, $7.50@8.50; do., medium $5@6; do., common, $2@3; ewes, heavy fat, $6@7; lambs, spring, choice, $14.50@15; medium, $11@13; common, $9@11.

Hogs.—In fair supply and demand at quoted rates. We quote: Best western, $18.50; good, nearby, $17@17.25.

City Dressed Stock.—In steady demand and generally firm with hogs a shade higher. We quote: Steers, 20@28c; heifers, 18@26c; cows, choice, 18@21c; cows, light, 12@16c; calves, city, dressed, choice, 30@32c; calves, country dressed, 25@28c; lambs, spring, choice, 28@32c; sheep, 10@20c; hogs, 24c.

LIVESTOCK MARKETS

—Sept. 4, 1920.

LANCASTER.

Cattle.—Receipts, 1,696 head; market fairly active; prices steady; good to choice steers, $15@16; fair to good, $13@14.85; medium to fair, $11@13; common, $9@10.75; fair to good bulls, $9.50@11; medium, $8@9.50; common, $6@7.85; good to prime heifers, $12.75@13.50; good to choice, $12@12.75; medium, $10@12; common, $7@10.25; good to choice cows, $9.25@11; medinm, $7.50@9.40; common, $6@7.50; canners and cutters, $3@6; feeding steers, best grade, $10.50@11.50; common to fair, $7@9; stock steers, best grade, $9@10; common to fair, $5.50@7.50; stock bulls, best grade, $8.75@10; common to fair, $5.50@7.50; stock heifers, best grade to choice calves, $17@19; medium, $12@17; common, $6@12.

Hogs.—Receipts, 137 head; market dull, prices lower; best grade, $16.25@17.25; lightweights, $15.50@16.25; toughs, $11@12.

PITTSBURGH

Cattle.—Receipts, 2,000; steady; steers, $15@16; heifers, $11@12; cows, $8@10.

Hogs.—Receipts, 7,000; lower, heavies, $15.75@16; heavy yorkers, $17@17.10; light, yorkers, $16.50@16.75; pigs, $15.50@16.

Sheep and Lambs.—Receipts, 6,000; steady, top sheep, $9; top lambs, $15.

Calves.—Receipts, 1,000; steady, top, $19.

NEW YORK HAY AND GRAIN

—Sept. 4, 1920.

Hay and Straw.—Offerings are still rather light at all harbor points, new invoices are also very light, the demand is a steady one and the market is without quotable change today. Rye straw selling anywhere from $21 to $22. Oat straw scarce and firm.

Hay.—Large Bales. Timothy, No. 1, $47 No. 2, $43@45; No. 3, $39@41; Shipping, $33@36; No grade, $25@32.

Clover, Mixed.—Fancy, $43@44; No. 1, $35@40; No. 2, $34@36. Straw.—Large Bales. No. 1 rye, $20@21; No. 1 oat, $13; No. 1 wheat, $13.

Wheat.—No. 2 Red c. i. f., $2.73½; No. 2, hard winter, $2.73½.

Corn.—No. 2 Yellow, $1.82.

Oats.—No. 2 White, 86c; No. 3, White, 85c; rye, c. i. f., $2.27; barley, feeding, $1.14.

PHILADELPHIA HAY AND GRAIN

—Sept. 4, 1920.

Baled Hay and Straw.—Receipts, 48 tons of hay. Hay steady. Straw scarce and firm. We quote: Old Timothy hay, No. 1, none here; No. 2, $31@32; No. 3, $27@29; sample, $23@25; no grade, $18@21; old clover mixed hay, light mixed, $29@30; No. 1 mixed, $27@28; new hay, as to quality and condition, $25@30. Straw—No. 1 straight rye, $17.50@18; No. 2, do., $16.50@17; No. 1 tangled rye, $15.50@16; No. 2, do., $14.50@15; No. 1 wheat straw, $14.50@15; No. 2 do., $13.50@14.

Bran.—Barely steady. We quote: Car lots, including sacks: Soft winter bran, western, in 100-lb. sacks, per ton, $53@53.50; spring bran, in 100-lb. sacks, per ton, $52@52.50.

Corn.—No. 1, yellow, $1.67@1.72. Other grades quoted at the following schedule of discounts: Mixed wheat, 5c under No. 2; No. 3 wheat, 3c under No. 2,; No. 4 wheat, 7c under No. 2 No. 5 wheat, 11c under No. 2. Sample according to quality.

Wheat.—New; No. 2 red winter, $2.70@$2.75; No. 2 red winter, garlicky, $2.60@2.65.

Oats.—No. 2 white, 79@80c; No. 3 white, 78@79c.

PITTSBURGH HAY AND GRAIN

—Sept. 4, 1920.

Market continues bare of hay while the demand is improving rapidly. There is no doubt, whatever that a few cars started immediately would strike a good market. Would advise immediate shipments of good, sound merchantable hay. Straw receipts very light but demand is fair. Good oat straw having the call. Receipts of oats exceeds the demand. Market dull. Ear corn and shelled corn quiet but firm. The following prices can be realized:

New and old No. 1 Timothy, $38@38.50; new and old Standard, $36@36.50; new and old No. 2 Timothy, $33@34; new and old No. 3 Timothy, $29.50@30.50; new and old, No. 1 Light Mixed, $33@34; No. 1 Oat Straw, $15.50@16; No. 1 Wheat Straw, $15@15.50; No. 1 Rye Straw, $15.50@16; No. 2 White Oats, 72@73c; No. 2 Yellow Ear Corn, $1.64@1.65; No. 2 Yellow Shelled, $1.63@1.64.

PHILADELPHIA DAIRY MARKET

—Sept. 4, 1920.

Butter.—Wholesale trade as usual on Saturday, was extremely dull, and there was no important change to note in the general situation. We quote as follows: Fresh, solid-packed creamery, high-scoring goods, 59@61c, the latter for jobbing sales; extra, 58c; do. extra firsts, 57c; firsts, 53@55c; seconds, 45@51c; sweet creamery, choice to fancy, 60@62c; fair to good, 49@59c, ladle packed, as to quality, 44@47c; packing stock, 39@44c; fancy brands of nearby prints were jobbing at 66@69c; good to choice, 58@65c; fair, 55@57c.

Cheese.—Firmly held. We quote: New York, whole milk, current make, fancy flats, 28½@29c; common to fair, 25@28c; Longhorns, 28@29c; single Daisies 28@29c; jobbing sales of fancy goods, 30@31c.

NEW YORK MILK MARKET

—Sept. 7, 1920.

Arrivals were heavier last week and the spell of cool weather checked the demand which resulted in a decided increase in the surplus. The rate for September in 200 mile zone is $3.65 per 100 lbs. for 3 percent milk; add 4c per 100 lbs. for each additional one-tenth of 1 percent butterfat. The local retail price for grade A bottled milk is 21c per quart; grade B 18c and grade B loose milk, 14c.

Receipts of milk and cream in 40-quart cans for the week ending September 4th, 1920, were as follows:

Railroad	Milk	Cream
Erie	42,114	5,098
Susquehanna	6,775	95
West Shore	12,482	2,144
Lackawanna	52,770	3,246
N. Y. Central (long haul)	210,795	5,115
Ontario	42,766	1,910
Lehigh Valley	57,452	901
New Haven	6,840	70
Pennsylvania	12,632	417
Other Sources	6,000	200
Totals	450,626	19,196
Same week last year	372,884	16,047

INTERSTATE MILK PRICES

—Sept. 4, 1920.

August milk prices continue in force for September.

TOBACCO MARKET

—Sept. 4, 1920.

Pennsylvania tobacco growers were interested in the present movement toward better prices and a generally improved condition of the industry thru organization. The matter is now in the actively formative period as shown by reports from practically all of the prominent producing sections. So far there has been marked lack of uniformity of action but out of the crucible we shall one day have a plan suitable for general application which should place the whole industry on a substantial financial basis. It is reported that in this state some 200 growers have united in an auction tobacco sales company with headquarters at Lancaster. This organization, which has not been incorporated, proposes that members offer their tobacco in field or shed up to November 30th at $30 per cwt. If not sold in this way, grower is to prepare a guaranteed sample bale and bring to sales floor during December. If not thus sold by the new year, the whole crop is to be delivered to sales floor during January or February. If at the end of that time the buyers has not shown up it is proposed to pack tobacco and put same in proper condition for manufacturers. According to this plan, some $100,000 would be required to begin with and when fully developed and on practical and profitable operating basis a capital of $3,000,000 would be required. The tobacco grower's association, which has no connection with the above movement, has asked the several similar organizations of the state to join them in a state federation for the general promotion of the industry and members from the several localities have been appointed to cooperate in the matter. Lancaster, York, and Clinton counties each have prosperous association and several other tobacco producing counties contemplate a similar effort.

FARM PRICES AND PROSPECTS

LIVE STOCK COMMISSION MEN IN DILEMMA

Live stock commission men find themselves placed in the proverbial position between the devil and the deep blue sea. In 1919 the legislature of Minnesota gave the State Railroad and Warehouse Commission authority to regulate the charges of live stock commission merchants. The Commission proceeded to exercise its authority by lowering the prevailing rates. The commission men took the case to the courts alleging that the order was invalid, first because the commission men were then under regulation by the federal government, and second because the act was unconstitutional. The court has just decided the case in favor of the life stock commission men solely on the grounds of the first objection. Now, Secretary of Agriculture Meredith has used the federal power to order the cancellation of the commission charge increases recently put into effect and to reduce the charges for handling carloads belonging to several different owners. At first these orders were fought by the commission men on the ground that they were not really under federal regulation, but the decision in the Minnesota case seems to close that avenue of escape.

It was reported late last week that an injunction had been issued at Kansas City restraining the government officials from revoking licenses of commission merchants under the secretary's order until after September 18th. Such a restraining order is being sought but one of the government officials involved has just stated to the writer that he has not yet been served with the order.

The commission men who so blandly raised their charges in the face of the known losses of most live stock producers during the preceding year might have expected trouble. Commission men cannot permanently work at a loss and farmers will not object to justifiable increases but the method of the commission men was not conciliatory, and the time chosen for the boost of about 33⅓ percent in their rates was certainly most inopportune.

When a Hedge Does Not Protect

Farmers are supposed to derive benefit from dealing in grain for future delivery on Boards of Trade and Chambers of Commerce thru the opportunity it affords the operators of elevators, shippers, exporters and others who engage in the merchandising of grain, to hedge their purchases or sales. Supposedly, this eliminates the risks of ownership and enables the purchaser at the country loading points to pay the farmer a price nearer the central market price than he could pay if he had to assume the risk of market changes between the time of purchase and the time of arrival at the terminal.

Since trading in wheat has been resumed, the speculative interests have held such bearish views that the prices of the grain futures have been considerably below those in the cash market. The result is a widening of the spread between the farm price and the terminal market price. Farmers in the Northwest who are obliged to deal thru privately owned elevators are selling their wheat on the basis of a price for December delivery at Mineapolis less the freight and handling charges. The cash grain is 12 or 15 cents higher than the December. It is doubtful if the margin would be any greater if there were no hedging facilities whatever. The alleged benefits of speculation are not evident in this instance. The opportunity to hedge may protect the elevator operator but it does not protect the farmer. Growers in the Northwest may be suffering more than any others, but all farmers who are selling wheat are effected in a greater or less degree.

FARM LOAN BANKS STRONG

"The Federal Land Banks are financially stronger than at any time since their organization, and their net earnings for the month of July—$257,000—were the largest for any month in their history"—was the statement made by the Federal Farm Loan Board today. This statement was prompted by the suggestion that in some quarters an effort was being made to create the impression that pending litigation, which has temporarily suspended the loaning operations of the Banks, was otherwise impairing the Farm Loan System. Commenting further, members of the Board stated:

"To understand this readily, it should be borne in mind that the earnings of a Federal Land Bank do not, like those of a Commercial Bank depend upon their current transactions. The loans of the Federal Land Banks are made for a long term of years—mostly 34½ years. On the unpaid balance of these loans each bank has an annual income of from one-half of one percent to one percent. This earning is fixed and certain regardless of new business. As the total amount of loans now in force is $344,475,709, the extent and stability of this income can readily be seen. The increase in net income for July is explained by the fact that, while the fixed gross income was substantially the same, the several land banks, because of the halting in their loan operations, have reduced their operating expenses, thus increasing the net income. Dividends have been paid and will be paid as usual. Funds are accumulating for the payment of November interest, which will be paid promptly. So far as bondholders and stockholders are concerned, the banks are functioning normally. Persons wishing to avail themselves of the benefits of the system must, of course, for the time being be disappointed, which is much regretted but can not be helped. While the banks have reduced their personnel and consequently their current expenses, this has not been done to a point that would interfere with the prompt resumption of their loading activities."

There may be more than one way to utilize the steep hillsides and other unused lands, but it is hard to think of a better way than to cover them with growing trees.

The bargain counter is a bargain counter only for those who are good judges of values; others had better beware of its enticements.

One kind of economy which is likely not to pay is using last year's jar rubbers. The cost of new ones is small, compared with the value of a few cans of spoiled fruit or vegetables.

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END your heating troubles forever by installing this Powerful New Furnace right NOW. Your home will be warm and "comfy" all thru, even in below-zero weather---You will burn ⅓ to ½ LESS fuel (coal or wood)—You will have LESS work tending fire and will avoid dust, dirt and fire danger of stoves in several rooms.

EXTRA weight, Straight Firepot, Large Firedoor, Extra Large Register and other features which make the STEWART so successful are the result of 88 years of stove-making experience.

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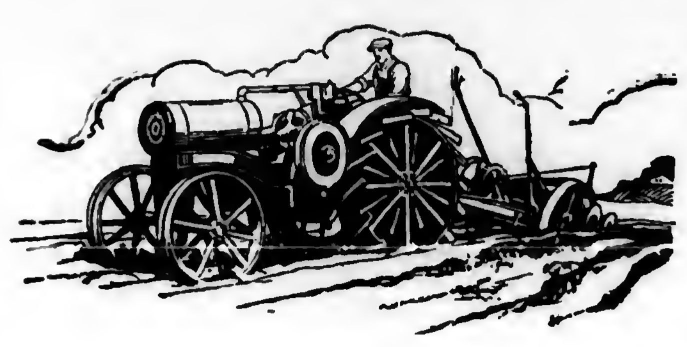

Spark Plugs and Plowing

WHILE plowing, you don't want to be held up for an hour or more in the field because of a poor spark plug in your tractor. Those delays pile up costs and cut down yield.

Guard against such delays by using only Bethlehem Spark Plugs—the plugs that have met the severest tests of tractor operation.

Bethlehem plugs "pull you through." They don't go dead and leave you stranded in the field. The International Harvester Company thinks so much of Bethlehem plugs that it has adopted them as standard equipment for tractors and trucks.

Bethlehem Automobile and Truck plugs are just as trustworthy as the famous Tractor plugs. Studebaker, Marmon and 48 other manufacturers have chosen Bethlehems as standard equipment. To help you get the right plug for every purpose, we have prepared a little booklet, "Hit or Miss?", which we will send you free on request.

BETHLEHEM SPARK PLUG CORPORATION
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STORING AND USING POULTRY MANURE

Would you please advise me thru your paper how best to care for poultry manure, especially during winter to keep it from heating. Is lime good for that purpose? Would adding acid phosphate make a more complete fertilizer? Does it hurt to dump this fresh manure on the growing grass or grain or between cultivated rows? Does it not pay better to store it in winter than dump it out on frozen ground to let the most important parts leach away? Can you give me an analysis of poultry manure? Give me your idea of building up farm land using poultry manure and litter. What must be used for general truck, etc., clover especially?—W. K. T., Montgomery Co., Pa.

Poultry manure is best cared for by starting with the use of acid phosphate spread on the dropping boards and on the floor of the poultry house before putting down litter in case it becomes at all damp during winter. Fresh poultry manure contains on the average one percent of nitrogen, .62 of one percent of phosphoric acid and .30 of one percent potash. The addition of acid phosphate increases the amount of phosphoric acid and tends to conserve the nitrogen which in fresh manure is very volatile. It should be added at the rate of no less than 10 pounds to 100 pounds of manure but more may be used on the dropping boards if it seems to be needed. Lime should never be mixed with poultry manure because it liberates the nitrogen which is its most valuable constituent.

If it is possible to store poultry manure in an old shed with plenty of ventilation where it may be spread out so that it may thoroly dry there is no better place. Heating may always be stopped by reducing the water content. In the absence of such a shed it may be placed in on end of the corn crib or in barrels which have holes cut thru the stave to allow air to circulate thru it.

It is possible that poultry manure might burn grass or other soft leaved plants if spread on them while wet or moist but no harm is done if it is spread after the dew has dried and while plants are dry. It may be used between the rows of plants just as commercial fertilizer is used.

Any kind of manure is best spread on the land as soon as it is made. Contrary to the old belief that the plant food is lost thru evaporation and leaching experiments have proved very conclusively that the losses from spreading are minimized because the material thoroly dries and bacterial activity ceases; that is, in winter; in summer, bacterial activty increases but it is of a helpful character and is beneficial.

There is nothing better for truck crops than poultry manure which has been properly reinforced with acid phosphate. In this case it is a good plan to put it in the surface in spring and work it in with a harrow.

If poultry manure is to be used on clover, it may be applied any time after the oats or wheat have been harvested and before the clover begins to grow in spring. It should be well reinforced with acid phosphate if it is to be used on clover. It would be better to use ordinary barnyard manure for top-dressing clover and save the poultry manure for truck crops or other crops which require more nitrogen.

RECORDS BUILD BUSINESS

(Continued from Page 2.)

Separate pages can be devoted to different features of the farming business such as dairy, poultry, hogs, household expenses, etc. At the end of the year a great deal can be told about the success of one feature of the business by subtracting the costs from the receipts and comparing it with the value of the equipment on hand.

Better results can be obtained by writing to the experiment station and obtaining their recommendations on farm account books. It is not necessary to pay a high price to an agent for a book in which to keep farm accounts.

I know a farmer who has been working as a tenant for several years but has never been far enough ahead to make a payment on his own farm. He says that he has never kept any kind of accounts but has been satisfied if he had some money at the end of the year. At the time of writing he did not even carry insurance on his household goods or his own life. He had no plans for the future, that included anything but tenant life. If such a man would start keeping farm accounts in an accurate manner, before long the accounts would either encourage him enough to make him strive for his own farm business or discourage him so he would try something more profitable for him than farming. At least he would not drift along without a steering gear to help him.

Farming has reached a stage where the cost of production governs the future of the business. A man cannot plan for the future without knowing facts concerning the past. No man needs to be a farmer with the vast opportunities in industry. If he is a farmer he should not be satisfied to work for nothing in the belief that it is his only hope for existance.

By knowing the cost of products the farmer can base his operations for expansion. It will not do to let farm organizations figure the cost of production and base all plans on that. A man must go further and know costs on his own farm. Then by comparing his costs with the figures on other farms he can determine which crops he can produce to the best advantage. Every farm has certain individual problems which must be overcome to make a profit on the crop. Let the figures tell you which crop is best for your farm. The time required to keep those columns of figures accurately will never be wasted.

MILLET PRODUCES HAY WHEN OTHER CROPS FAIL

Millet is a valuable crop to grow for hay where other spring crops have failed, according to the Ohio Experiment Station.

Millet has yielded as high as 4½ tons of hay per acre in tests at the Ohio Station. The German millet may be planted in June; it does best in warm weather.

Hungarian millet has yielded satisfactorily and this variety is adapted to culture on thinner ground than is German millet.

Millet may be broadcasted and cultivated in with a harrow or drilled in with a grain drill. Three or four pecks of Hungarian or German millet will seed an acre.

BROOME COUNTY, N. Y., NOTES

We are having considerable rain and very cold weather for August. Potatoes are yielding good, but some are finding lots of rotten ones while digging, they are bringing from $1.50 to $2 per bushel. The grasshoppers arrived in swarms about wheat cutting time, some fields were damaged others cut a few days earlier escaped entirely. Oats have been very badly cut by the grasshoppers, so that some of the farmers have cut and cured them, and put in the mows for hay, deciding that so many oat heads had been cut off it would not pay to thrash them.

Large flocks of wild geese went over here going south three weeks ago, and now the past week the robins have gone also, one old gentleman who has erected many bird houses around his home and spends much time studying their habits says that this year for the first time that he knows of the robins have only raised one litter, that always before they have raised two litters during the summer, that he saw them collecting in larger flocks than usual one day last week at the feeding place he has for them and after eating they all left together and have not been back since. These signs point to a very early winter.

The farmers are beginning to cut their second crop of hay, rains have raised the river and creeks and some land has been over-flowed.

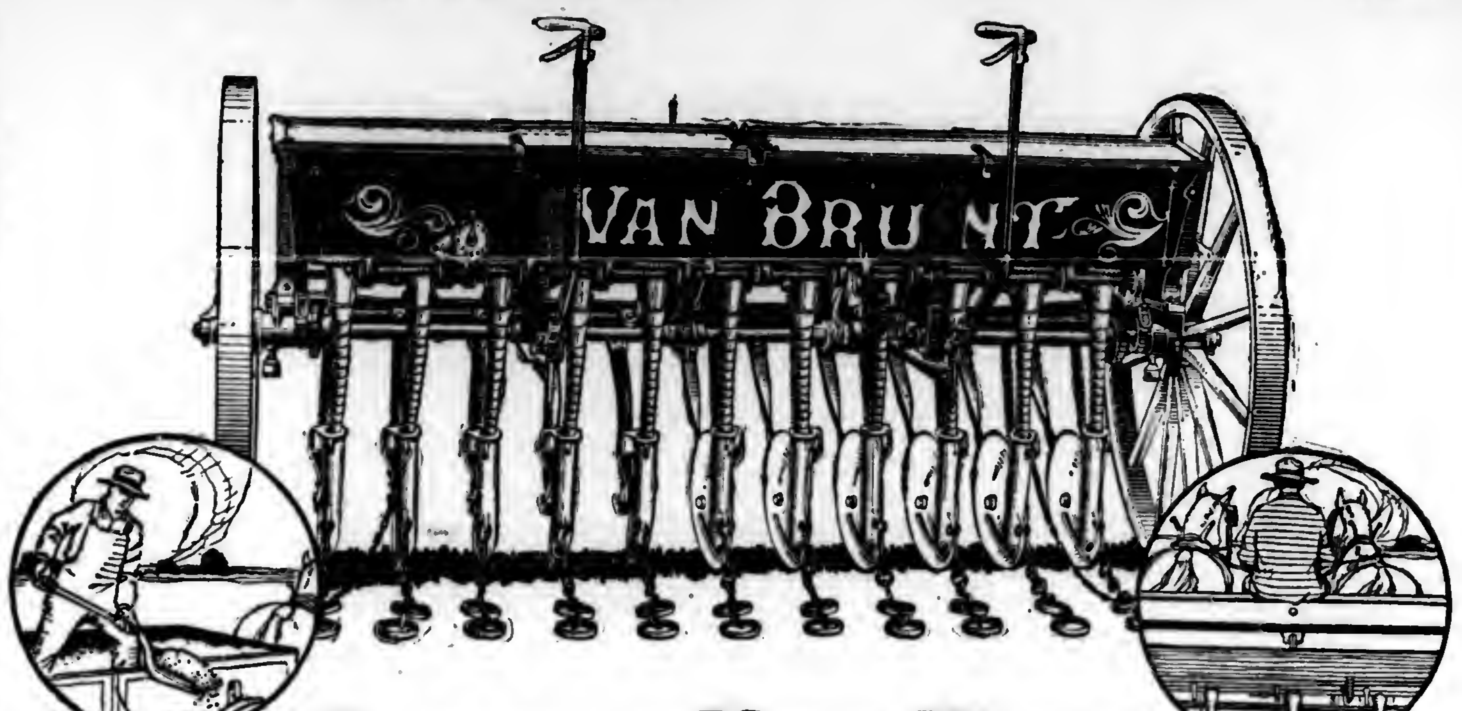
The Farm Bureau of Broome Co., held a picnic at Ideal Park, Endicott, today. There was a very large attendance, the Grange and Milk producers uniting with the Farm Bureau for the picnic. Several speakers were listened to by the older people, the younger ones finding many attractions around the park. Chief among them being the concrete swimming pool from one to seven feet deep with shoot the chutes that landed them out in the pool. Ball games in the forenoon and afternoon both with swings, merry-go-rounds and everything else together with beautiful weather for the day all combined to make a perfect day of it. A milk bar was one of the attractions with Holstein Highball, vieny with Gurnsey Fizz and Jersey Julips. Eggs are bringing 70c per dozen. Apples from $1 to $2.50 per bushel. Feed has dropped in price a little. Milk brings 8½c per quart this month So much rain has kept the pastures in good condition.—C. H.

MARYLAND NOTES

Cantalope prices have taken such a drop during the last few days that farmers in many instances have refused to sell them. They claim it is better for them to permit their melons to ripen and rot on the vines than to go to the expense of picking, packing and hauling for the prices offered. From $5 and more a crate 10 days ago, the price has fallen to $1 and lower. The number of crates shiped from Salisbury last Thursday was 6,000.

Many growers took their trucks and wagons loaded high with cantaloupes to the auction block to sell, but learning of the low prices offered hauled them away again. Many sold fruit to the local stores, they claim, at better prices than those offered by the city buyers. Others carted their loads back to their farms and used the melons for hog feed.

Since the long rain spell has ceased for two days farmers are making preparations for fall wheat and alfalfa.—Karl P. Thompson.



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Your time is so valuable and hired help is so costly that it will pay you to plant your seed and destribute fertilizer at one time with one machine. You not only save time and labor, but also get the additional bushels per acre that drilled seed produces over seed that is broadcasted, especially when drilled with

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Sicilian Buttercups Farm range, prize winning Buttercups. Investigate this wonderful variety. Write for circular. **MAPLE LAWN FARMS. CORTLAND, N. Y.**

TIFFANY'S SUPERIOR DUCKS Mammoth Pekin, Giant Rouen, and Indian Runner Ducks and Drakes, $2.50 each and up. Aldham Poultry Farm, R 37, Phoenixville, Pa.

LEGHORN COCKERELS From Barron 300 egg strain. Pedigreed White Leghorn cockerels 16 weeks old; to be delivered in Sept. Satisfaction guar't'd. Prices, No. 1, $5; No. 2, $3.50. L. C. Beam, E. Mauch Chunk, Pa.

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S. C. White LEGHORN COCKERELS, 4 mos. old, $2.50 each, prepaid. Good chance to improve your flock. MRS. C. E. STUBY, BUFFALO MILLS, PA., R. 1.

Silver Spangled HAMBURG COCKERELS, 11 weeks old, $3.00 each. PERLEY W. LAWTON, Tiadaghton, R. 1, Pa.

For Sale Purebred Duroc Jersey boar four months old, bred right and priced right. BYRON P. HUGHES, DELTA, PA

BULL CALVES at BARGAIN PRICES We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred, healthy bulls, from a clean, Tuberculin Tested Herd at reasonable prices. King of the May—Dolly Dimple—Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees. **WAWA DAIRY FARMS, 22 S. 32nd St., Phila., Pa.**

STEVENS' HOLSTEIN FARM OF CORTLAND, N. Y. King Korndyke Sadie Vale Jr., No. 20391, two nearest dams averaging 30 pounds of butter in 7 days, heads my herd. Butter records from 17 pounds two-year-olds to 34 pounds at full age. Also high grade Holstein calves, either sex, $20.00 each. Write your wants. PAUL H. STEVENS, Prop.

HOLSTEIN BULL CALF 3 mos. old, beautifully marked, showing the wonderful individuality of his sire, a nearly 32-lb. son of King Model. This calf is exceptionally well grown. Send for price and pedigree. Hope Farm, R. 1, Lititz, Pa.

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Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale. **MILLARD E. BASEHOAR, Littlestown, Pa.**

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Reg. Holstein Bull Calves, from officially tested dams and a 30-lb. sire. Write for prices, pictures and pedigrees. Walter M. CRUTTENDEN, Forty Fort, Pa.

MILKING SHORTHORNS, sons of Glenside Royal Stamp, grandsons of General Clay; also a few females. **C. M. KENNEDY & SONS, ULSTER, PA.**

Registered Yearling Shropshire Rams For Sale Chesterbrook Farm, Berwyn, Pa.

Chester Whites and HAMPSHIRE SHEEP. Write your wants. We can please you. TWIN BROOK FARM Newville Pa

CONSIGNMENT SALE of Registered and A. R. O. Holstein Friesian Cattle, at the HORNLESS HOLSTEIN FARMS, CLARKS SUMMIT, PENNA., 10 miles north of SCRANTON, PENNA., on the D. L. & W. Railroad and the Northern Electric Railway. ABOUT 100 HEAD. MANY of them are sired by the BEST DAMMED BULL of the breed, a son of the WORLD'S RECORD SENIOR 4 YEAR OLD, KEYSTONE BEAUTY PLUM JOHANNA, with 25,787.5 lbs. of milk, 1294.7 lbs. of butter, strictly official in a year, 4% IN LONG TIME TEST. Daughters of cows with semi-official records from 600 lbs. of fat and up; sons of 30 lb. cows; son of a cow with 1050 lbs. in semi-official test. 25 animals from a herd under Federal Supervision. Many of the animals sold on a 60 day retest.

We have on hand a number of bulls and bull calves at private sale before October 1st. NATURALLY HORNLESS.—Geo. E. Stevenson, Clarks Summit, Pa.

WANTED A HOME for choice registered and high grade Holstein-Friesian heifer and bull calves, $25 and up. Write us your wants. Browncroft Farms, Cortland Co. McGraw, N.Y.

Eight Reg. Jersey Heifer Calves, from two weeks to 18 months old. Tuberculin tested; herd under federal supervision. **D. B. McDOWELL, NOTTINGHAM, PA.**

Ayrshire Bull Calves From high record A. R. Dams. **ROBERT TEMPLETON & SON, ULSTER, PA.**

SUNNYBROOK GUERNSEYS 40 head, free of tuberculosis, bull calves for sale. **EDWIN S. MAULE, COATESVILLE, PA.**

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High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.
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Registered and Grade Holsteins
Get busy you calf club promoters. I have 50 registered heifer calves, 3 to 10 months old, $100 each for the lot, choice $125.00. 200 registered and high grade cows, heifers and bulls. Car of any age that you want. 7/8-Holstein heifer calves, $20 each. Express paid in lots of 5.
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PUREBREDS AND GRADES
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An organization [illegible] for the purpose of assisting its members in producing
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MID-SUMMER SALE OF AYRSHIRES
A fine selection of heifer calves, bred heifers, and young cows in this offering. Excellent opportunity to found or build up your herd with animals from the best breeding backed by large records. Prices reasonable. Tuberculin tested, no reactors.
CRESTMONT FARM, SUNBURY, PA

LIVE STOCK

THE FAIR SEASON

By W. H. TOMHAVE

The fairs of the country, both large and small, are becoming more and more educational in character. The time will come when the "side-show," "pike" and "game of chance" will be conspicuous by their absence on the fair grounds. Some of the large fairs of the country that are now operated minus these objectionable features are praised for their high standard and are beginning to reap their reward in attendance of the people who appreciates a clean fair. Horse racing, automobile racing and other clean sports are a valuable addition to any fair if they are not the main attractions. The people that go to a fair expect to be entertained as well as educated. They go to the fair to learn and study but at the same time want some amusement. The educational part of any fair should be in the form of demonstrations rather than in the form of lectures. People do not go to the fair to listen to a speech or discussion of every-day problems. If the object lessons are put in such form that those especially interested can spend enough time to study the problem, the greatest good can be accomplished.

Interior of Calf Barn on Big Dairy Farm

It is a good plan to attend a local, district, or state fair if it is possible to do so. People should go with the idea of learning what some one else is doing along the line in which they are interested. Agriculture and live stock production are lines of work that require the closest attention and the application of modern and up-to-date methods. The results of the work of successful live stock breeders can be studied by the exhibition of the herds and flock at the modern and up-to-date fair. The animals of the same age and breed come before the judge for placing and if those interested follow the work of the judge and listen to the reasons for placing such animals, much can be learned concerning breed standards and requirements for the better types of farm animals. A comparison of the animals of the same age and breed in the same class provides an interesting object lesson. In many cases there is a marked difference in the individuals of the same age, due to feeding and breeding.

A trip to the best fair within a reasonable distance to study the progress in live stock breeding and crop production is a good investment.

PARALYSIS IN SWINE TREATED SUCCESSFULLY

Perhaps the persons in Missouri most interested in the diseases of hogs are members of the pig clubs organized by the University of Missouri College of Agriculture. These members often borrow the money necessary to embark in the hog business. If the first animal purchased dies, the club member faces bankruptcy. A brood sow belonging to one of the Harrison County boys was paralyzed in the hind quarters and was thin in flesh and from all appearances would soon die. The county agent recognized the trouble as being caused by too heavy suckling of pigs. He recommended taking the pigs away from the sow, feeding her all the skim milk she would drink and giving her liberal feedings, in addition to some medicinal treatment. By the end of the week the sow had entrely recovered and was rapidly regaining her strength.

The University of Missouri College of Agriculture has just issued a circular on "Paralysis of Hind Quarters in Swine," which states several causes for the malady and treatments to be given. A copy of this may be had free by asking for Extension Circular 86.

NUMBER OF FARMS IN PENNSYLVANIA DECREASING

The Pennsylvania Department of Agriculture notes that the number of farms in Pennsylvania in 1900 was 224,248, and the number in 1910 was 219,295. If the decrease in the number of farms is as great during the last decade as during the period from 1900 to 1910, the 1920 census, now being compiled, will show approximately 214,470 farms.

Everything on the farm from the baby to the youngest pig gets a name except the farm itself. Doesn't "Sunny Acres" or "Meadow View" sound more attractive than "Bill Smith's place?"

The hen's time is worth too much to sit on eggs; get an incubator if you have a hundred or more hens.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Deep Milker.—I have a cow that has had two calves and it is almost impossible to dry her. She is due to come fresh in about 8 weeks. L. A. M., Allerton, Mass. Dairy cows usually drop in milk yield five or six weeks before they freshen, at which time if put on timothy hay they will go dry. If a cow is a persistent milker and refuses to go dry, better milk her once a day; if not, her udder may be ruined.

Rickets.—Several of a litter of pigs 2 weeks old fall on their knees and have rather poor use of their legs. Is it caused by their mother's milk? O. J. H., Reading, Mass.—I am inclined to believe the pigs are not properly nourished, perhaps on account of the mother not being fed enough grain and green feed. Make this change and it should have good effect. If you have plenty of milk, let her have some to drink and feed some tankage once or twice a day. It is possible that the young pigs inherit their ailment.

Rheumatism.—Have a collie pup ten months old that limps some, not always in same leg. The pup eats well and is well fed. R. G., Carbondale, Pa.—Give pup three grains of sodium salicylate 3 times a day. If the joints swell paint them with tincture of iodine three times a week.

Contagious Abortion. — Three of our cows have aborted, carrying their calves from 7½ to 8½ months and the calves were alive. Have four more pregnant cows. Can I prevent them losing their calves? Had I better sell my other cows? E. B., Harford, Md.—Do not sell your aborters, unless they fail to get with calf. Leave your pregnant cows alone. Disinfect your cow stable and keep it very clean. Selling diseased cows will only spread the infection.

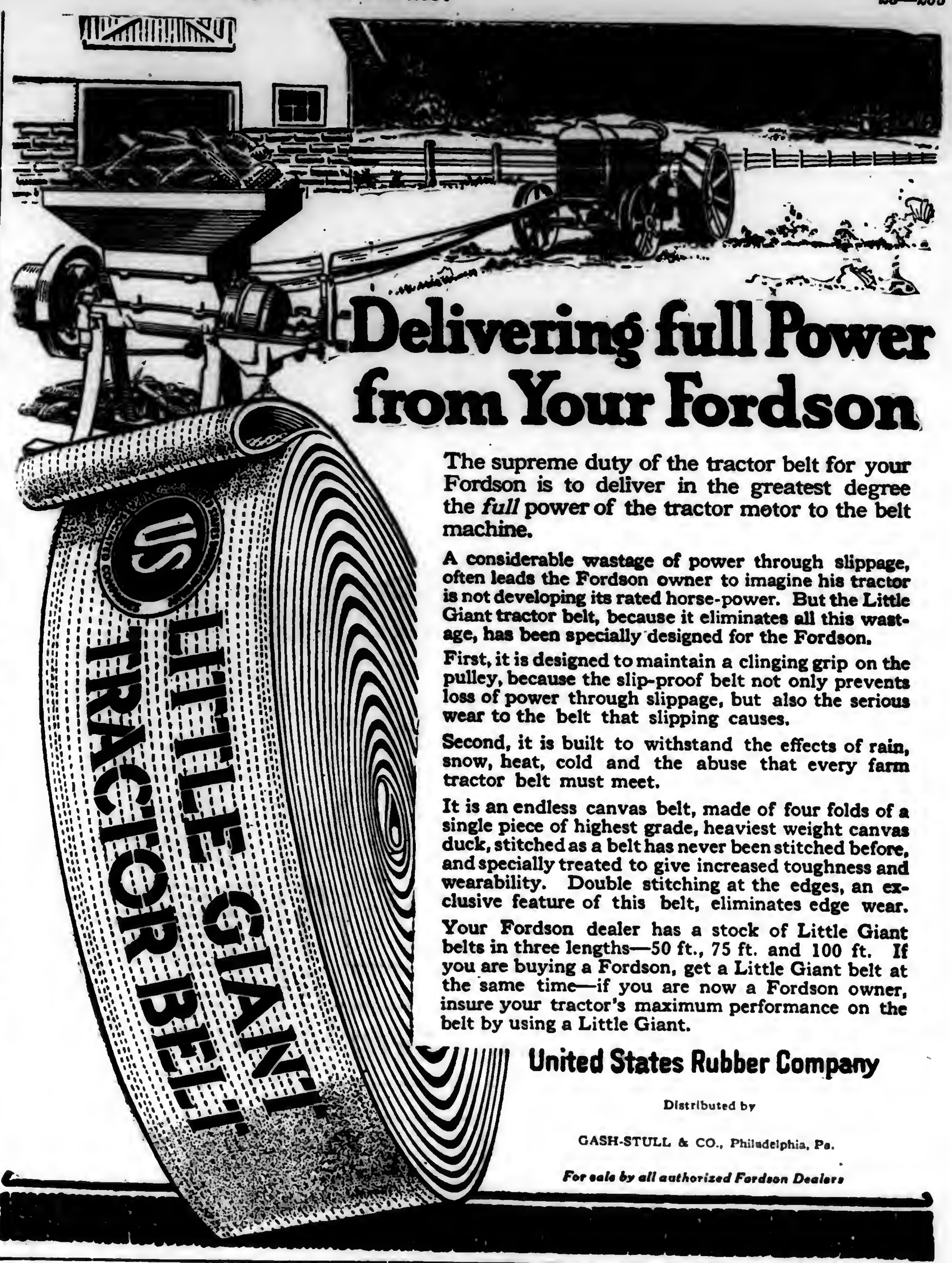
Bloody Milk.—Cow that freshened three months ago, calf sucking her ever since, gives bloody milk from three of her teats. C. H., Belle Center, O.—Doubtless the calf bruised the udder. Gentle, instead of rough, milking is the remedy.

Exertion Causes Cow to Cough.—Cow due to freshen September 15th coughs whenever she runs. A. M. J., Altoona, Pa.—Give her a tablespoonful powdered licorice in feed twice daily. Rub throat with camphorated oil once a day.

Hard Milker.—The holes in cow's teats seem to be too small, requiring much pressure to milk her. W. W., Lovingston, Va.—Either have the teat canal dilated with dull probe, or slit canal on four sides. This is work for a qualified veterinarian, or schooled dairyman.

Rheumatism. — Nine-months-old pig does not have good use of hind legs and joints are swollen. R. S. M., Morrison, Va.—Paint swollen joints with tincture of iodine daily. Give five grains sodium salicylate in feed three times a day.

Scurvy.—Our shoats are troubled with a dryness and scurvy condition of skin. A. M. L., Mantua, N. J.—Apply one part coal-tar disinfectant and 50 parts water, or apply one part lysol and 90 parts water.



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The supreme duty of the tractor belt for your Fordson is to deliver in the greatest degree the *full* power of the tractor motor to the belt machine.

A considerable wastage of power through slippage, often leads the Fordson owner to imagine his tractor is not developing its rated horse-power. But the Little Giant tractor belt, because it eliminates all this wastage, has been specially designed for the Fordson.

First, it is designed to maintain a clinging grip on the pulley, because the slip-proof belt not only prevents loss of power through slippage, but also the serious wear to the belt that slipping causes.

Second, it is built to withstand the effects of rain, snow, heat, cold and the abuse that every farm tractor belt must meet.

It is an endless canvas belt, made of four folds of a single piece of highest grade, heaviest weight canvas duck, stitched as a belt has never been stitched before, and specially treated to give increased toughness and wearability. Double stitching at the edges, an exclusive feature of this belt, eliminates edge wear.

Your Fordson dealer has a stock of Little Giant belts in three lengths—50 ft., 75 ft. and 100 ft. If you are buying a Fordson, get a Little Giant belt at the same time—if you are now a Fordson owner, insure your tractor's maximum performance on the belt by using a Little Giant.

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PATHFINDER'S RIPPER
By PATHFINDER
dam by Great Sensation, heads our Duroc herd. Line bred Pathfinder offering of 40 head at Public Auction Dec. 2nd. Get a catalog.
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Everything sold. Booking orders for gilts bred for fall farrow, and pigs for Pig Club work only.
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Large Type Reg. Berkshires of all ages for sale. Select a breeder from a large litter. Pay when you see stock. No cash in advance.
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Reg. Berskshires with size and quality; long bodies, good in back and legs. Spring pigs and bred sows.
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All ages. Bargains in bred gilts and boars of all ages. We are overstocked and the price is right.
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Special Sale REGISTERED DUROC SOWS bred for Summer farrow, $65.00 each, registered and express paid.
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TARRYMOOR BERKSHIRES
Quality Growthiness Prolificacy
We guarantee satisfaction.
Robt. R. Atkinson, Wrightstown, Pa. Bell Phone.

HEAD YOUR BERKSHIRE HERD
with a son of Highwood Majestic. I have five left from spring farrow. Write for prices and pedigrees. MARVIN BEACH, Franklin, N. Y.

Chester Whites Boars and Sow Pigs. Bred Sows. Collie dogs.
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O. I. C. Males 2 to 4 months old. Satisfaction guaranteed
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10 young sows, bred to Fashion Giant, to farrow September litters. Spring and service boars. For catalog and price-list address
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Bred gilts, bred sows, and 2 months pigs, not akin. Free circular. LOCUST LAWN FARM, Box 2, Bird-in-Hand, Lancaster Co., Pa.

Try Reg. Big Type Spotted Poland Chinas. The hog of the hour. Write for prices. Satisfaction guaranteed or money refunded
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Big Type Poland Chinas All ages. Write your wants
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Write for prices or come and see the fine bred gilts and young sows ready for breeding in the Fall, that we are offering at bargain prices. The bred gilts are part of our foundation herd. For reference—our satisfied customers.
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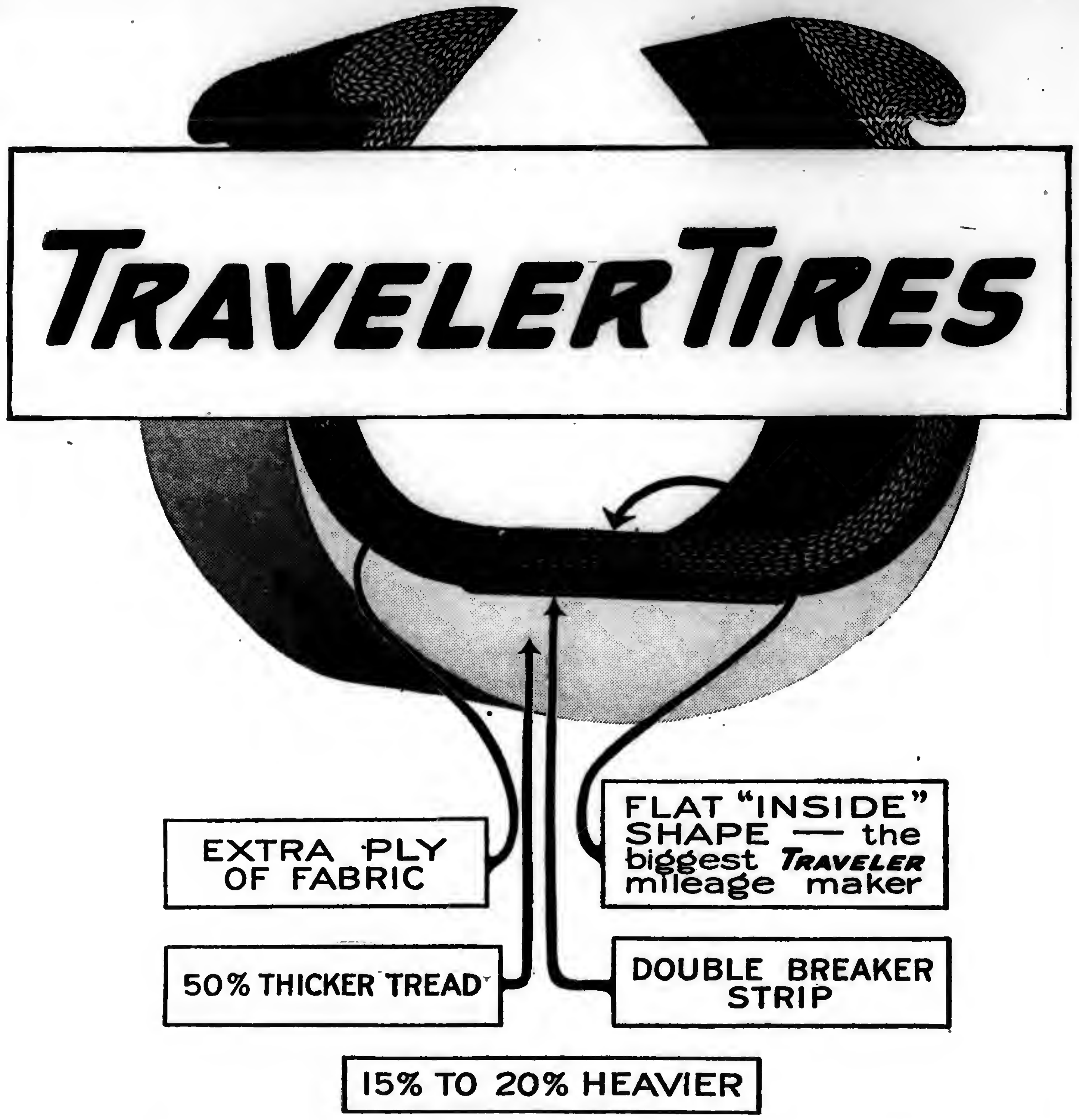

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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880
PUBLISHED WEEKLY

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75 Cents per Year

Why Girls Need Training in Economics

As the Girl of To-day Is Taught, So Will the Women of To-morrow Buy.

Women are the determining factors in production because they direct the consumption of 85 percent of the wealth of the country. Whenever that consumption becomes directed along certain fixed lines the full effect will be felt by producer and distributor. It behooves the Nation, then, to see that women are educated to become wise and intelligent buyers.

"As the girls of today are taught, the women of tomorrow will buy and use. As those women buy and use, the retailer will demand from the wholesaler," says Mrs. Henrietta W. Calvin, specialist in home economics, Bureau of Education.

Just what may be the result when women are all like-minded was manifested when women became possessed with the desire to knit. The effect upon the whole woolen situation which resulted from 20,000,000 women demanding knitting yarn is a matter of history.

Women decide the color, design, and type of floor covering, the width and size of sheets, the quality and kind of blankets and covers, and the length, weave, and pattern of window draperies. They are the ultimate consumers of the product of innumerable factories and shops.

"The school and college courses of the present and future should enable women to judge wisely, purchase carefully, and appreciate the true value of good material, good workmanship, and really beautiful designs," so Mrs. Calvin designates the ultimate purpose of home economics.

19,000 U. S. Girls Studying Economics

According to statistics compiled by the Bureau of Education, there are now 19,000 American girls pursuing the study of home economics in schools and colleges, and these students will ultimately bring within the scope of their influence as teachers approximately 1,000,000 pupils, as home economics education begins in the fifth grade in the more progressive cities. It includes foods and nutrition, textiles and clothing, house construction and furnishings, household management and sanitation, child care and training, household administration, and financial management.

Present-day conditions make such training imperative, and Mrs. Calvin explains this need by calling attention to the fact that women were formerly producers of the so-called "dry goods" for their households. They carded, spun, and wove both cotton and wool; they worked with men in the preparation of flax and the production of linen. Even the cloth that was bought and sold was produced in other homes, not in factories. Every housewife was a judge of the quality of cloth because she had, directly or indirectly, been concerned with the making of cloth.

Garments were made either by the home worker, the employed seamstress, or the local and often itinerant tailor.

Bed linen, blankets, and coverlets were homemade, and instead of down comforts covered with thin silk or silkaline there was the patched quilt or comfort made from numerous small and useless bits of cloth and lined with carded cotton or wool or even with feathers from the home-grown ducks.

With the coming of machinery the clothing industries left the homes, and gradually even the recognition of certain fabrics waned and a generation of women came who neither knew cloth nor were they skillful in the use of the needle or machine. At about the same time many women became wage earners, and hence no longer vitally interested in the affairs of the home.

Untrained Home Makers Developed

Other agencies were at work changing the lives of women. School terms increased, the school day lengthened, music and lessons occupied the evening hours, social amusements multiplied, and, did the mother desire to train her daughter in household arts, there was neither time nor opportunity. A generation of untrained home makers developed.

The home economics specialist of the Bureau of Education says, "The teaching of textiles and clothing aims first to give skill in garment making. While there can be no doubt but that the wage-earning women should purchase ready-to-wear clothing or that night or Sunday work detracts from occupational efficiency, there are many millions of non-wage-earning women who can not more profitably use their time than in sewing upon their own and their families' clothing.

"Each woman should be able to decide just how her time can be best spent. If she has a family of little children and a fairly liberal income, unquestionably her time and strength are better spent in caring for the physical, mental, and moral development of her children. But if she must extend her income to its uttermost, or if she have few or no small children, she can use her time and her means best by fabricating some or all of her own undergarments and many of the household articles.

"Clothing courses are designed to give skill in mending, repairing, and remaking. Even the wage earner needs to be skillful with her needle that small repairing may be done and the use of her garments extended.

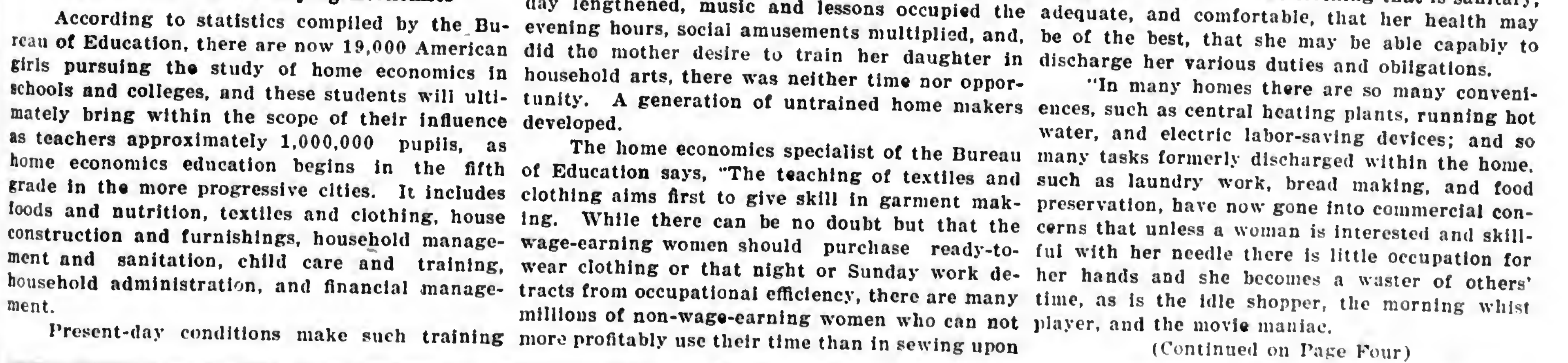
"The third motive for giving this work to girls and women is that they may be more intelligent in selecting fabrics, trimmings, designs, and colors. How often does the retail merchant answer the query, 'Is it all wool?' or 'Will it fade?' or 'How much material will I need for a dress?' Questions that every woman should be trained to answer for herself.

Health Affected by Garments Worn

"Nor should courses in clothing teach these things only. The health of American womanhood is affected by the garments worn. She should be taught in schools, in colleges, and in public lectures and clubs to choose clothing that is sanitary, adequate, and comfortable, that her health may be of the best, that she may be able capably to discharge her various duties and obligations.

"In many homes there are so many conveniences, such as central heating plants, running hot water, and electric labor-saving devices; and so many tasks formerly discharged within the home, such as laundry work, bread making, and food preservation, have now gone into commercial concerns that unless a woman is interested and skillful with her needle there is little occupation for her hands and she becomes a waster of others' time, as is the idle shopper, the morning whist player, and the movie maniac.

(Continued on Page Four)



Soils and Fertilizers

Conducted by Dr. J. G. Lipman

Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

OUR PRESENT AND FUTURE SUPPLY OF PHOSPHATES

(Continued from Last Week.)

The trend both in the fertilizer industry and in farm practice has been of late years toward more and more concentrated as well as more readily available fertilizers. It is evident that a ton of ground phosphate rock will contain twice as many pounds of phosphoric acid as a ton of acid phosphate made from such phosphate rock. On the other hand, the phosphoric acid in ground, untreated phosphate rock is not readily available, while the phosphoric acid in the acid phosphate is readily available. For the sake of creating this availability, a ton of phosphate rock must be diluted with another ton of commercial sulfuric acid.

As the cost of freight, handling, bagging and overhead increases, less concentrated fertilizers become in proportion more and more expensive, while the more concentrated fertilizer, for the same reason, becomes a cheaper source of plant food. It is for this reason that many processes have been devised for treating phosphate rock so as to increase the availability of its phosphoric acid without reducing in any far reaching way its proportionate content.

One of the products, known as double superphosphate, represents an attempt to produce a very concentrated acid phosphate. It will be recalled that a few years ago 14 percent acid phosphate was the standard product. At present 16 percent acid phosphate is the standard product. Double superphosphate contains as much as 45 to 50 percent of available phosphoric acid. In other words, one ton of double superphosphate will be equivalent to three tons of 16 percent acid phosphate—at present regarded as a high grade product. From the standpoint of freights, handling, bagging, etc., double superphosphate is by far a cheaper source of acid phosphate than is 16 percent acid phosphate. It can be made readily by treating the phosphate rock with a sufficiently large amount of sulfuric acid to dissolve all of the phosphorus so that it appears in the form of a heavy, clear, liquid known as phosphoric acid. This product is an acid which can, therefore, take the place of sulfuric acid for dissolving phosphate rock. Hence, double superphosphate differs from standard acid phosphate in that it consists of soluble phosphate of lime only, whereas standard acid phosphate consists of a mixture of soluble phosphate of lime and of sulfate of life, commonly known as gypsum or land plaster.

Recent investigations show that liquid phosphoric acid may be produced by heating either high grade or low grade phosphate rock in an electric furnace. The intense degree of heat will cause the phosphorus to pass off, leaving the lime behind. By mixing the phosphorus fumes with steam in suitable proportions., liquid phosphoric acid is produced. This liquid may then be employed for treating ground phosphate rock in the manufacture of double super-phosphate. It is believed that the double superphosphate made in the western states could compete successfully with the standard acid phosphate in eastern territory in spite of the longer haul. An experimental plant is being constructed at Anaconda, in Montana, for the manufacture of double superphosphate.

A product known as calcined phosphate is made by heating phosphate rock, either by itself or mixed with small quantities of certain salts, in a suitably constructed kiln. Such calcined phosphate will contain up to 30 percent of phosphoric acid. While this phosphoric acid is readily available as shown by actual field trials and certain chemical tests, it is not water-soluble.

Another material, more concentrated than ordinary acid phosphate, is a product known as Ammo Phos. This is made by the American Cyanamid Company of New York City. The product has been exported abroad, largely to Japan. It contains not only phosphoric acid, but also ammonia. Hence, it is a material furnishing two instead of one ingredient of plant food. There are two grades of Ammo Phos—one containing 13 percent of ammonia and 47 percent of available phosphoric acid, and the other containing 20 percent of ammonia and 20 percent of available phosphoric acid. It is made from cyanamid, a product manufactured in its turn by heating in an electric furnace a mixture of lime and coke. This mixture is made to combine with air nitrogen, and the resulting material is, therefore, a nitrogenous fertilizer known as cyanamid or lime nitrogen. As such, it is not entirely satisfactory for mixing with other fertilizers. Hence, it is steamed under pressure and the ammonia which passes off in the process is combined with phosphoric acid.

Still another product which experimentally has already given promising results is so-called Bac-Sul-Phosphate, representing a mixture of inoculated sulfur and ground phosphate rock. The bacteria used for inoculation are known as sulfofying bacteria. These have the ability to change sulfur into sulfuric acid, which when phosphate rock is present will attack it and make it soluble. It would appear that, when inoculated sulfur and ground phosphate rock are thoroly mixed and added to the soil, the sulfuric acid manufactured by the sulfofying bacteria will make the phosphate soluble gradually and supply thereby the needs of the growing crops. Should field trials demonstrate that this is so under a wide range of climatic and soil conditions, Bac-Sul-Phosphate would be a cheaper material than acid phosphate since it would contain about 25 to 29 percent of phosphoric acid instead of the 16 percent in standard acid phosphate, and would, moreover, be a more satisfactory material for mixing with other fertilizer ingredients.

Plenty of Power For Double Disking

From what has been said above, it will be apparent that efforts are being made to meet the higher cost of transportation and handling by developing more concentrated phosphate products, and, incidently, provide for the conservation of the supplies of phosphates by utilizing for the preparation of the higher grade products certain types of phosphate rock now regarded as unsuitable for the manufacture of acid phosphate by the sulfuric acid process.

MAKING THE WOODLOT WORK

There is a larger acreage devoted to the growing of timber on the farms of Pennsylvania than any other one crop. In spite of the large acreage, this branch of farming has received less attention than any other. The farm woodlot is capable of producing a large money return per acre when proper attention is given to it. Few farmers would expect to raise a good crop of grain without preparing the soil, fertilizing, seeding, cultivating, and protecting it from grazing, yet that is the way many woodlots have been managed. High grade lumber, railroad ties, telephone poles, construction timber, as well as fuelwood, can be produced if the woodlot is given a chance.

The product of the woodlot is a farm crop just as much as wheat, corn, or hay. To receive the maximum returns, it must be cared for and protected. The owner must not expect the woodlot to produce a never-failing supply to which he may go each winter and remove the best trees for lumber and fuel, without making some provisions for restocking. He must plant trees to replace those that have been removed, take out the worthless ones, and protect the valuable young growth. Much of this work may be done during the winter and early spring when other farm work is not pressing.

A farm woodlot is no small asset. Many cases may be cited where the timber sold from the woodlot was worth as much as the farm after the timber had been removed. A sufficient supply of lumber, posts, and firewood is very essential to the farmer and a well regulated woodlot will furnish it. Trees serve as a protection for field crops and when properly located and managed the loss to grain crops due to freezing and drying out is negligible. Even young growing trees have a money value that has been recognized by the courts.

What then is the trouble with the farm woodlot? Why is it so often found to be insufficiently stocked; composed of worthless species; made up of mature, damaged and "wolf" trees; or infested with destructive insects and fungi? The owner knows that the returns have not been good and he is familiar with the conditions. As a rule the necessary labor is on hand during the winter to do improvement work on it and the Department of Forestry will furnish trees, free of charge, to plant the idle areas. Is it not true that the owner does not fully understand the principles of growing trees? If a good stand of timber has developed he does not know how much he has and easily falls a prey to the experienced lumberman who purchases it. Sales have been made when the farmer sold the stand for 25 percent of its full market value.

The growing and marketing of timber is a business in itself. The experienced lumberman does not understand farming, neither can the successful farmer understand all the points of the lumber business. It is evident that the farmer needs assistance in solving his woodlot problems.

The farm agent is doing a splendid work in assisting the farmer to produce the largest agricultural crops and the Department of Forestry is anxious to be of service by assisting him to practice forestry on his timberland and thereby get the largest return from his woodlot. To encourage this work the Department will gladly co-operate with private owners as far as its resources will permit.—John W. Keller, Bureau Silviculture.

(Note.—Upon request by the owner to the Commissioner of Forestry, Harrisburg, Penna., any farm woodlot in Pennsylvania will be examined and advice will be given, free of charge.—Editors.)

AT THE TRENTON FAIR

Thousands of people thruout the east will be interested in the announcement that this year's exhibition of the Trenton Fair gives promise of surpassing all previous records from the standpoint of attractions and displays.

Of particular interest will be the agricultural and farming implement department which has been enlarged to carry appeal to all farmers. Prof. Arthur J. Farley, of the New Jersey Experiment Station at New Brunswick, N. J., is superintendent of the department of agricultural and horticultural products, which will present a display of unprecedented proportions.

There will be interesting exhibits of cattle, sheep, swine, dairy cattle, fruits, grains, home and dairy products, honey, vegetables, horses, dogs, cats, birds, farming implements, etc.

How to Pack a Barrel of Apples

Proper Packing Shortens the Route to the Consumer and makes Marketing Easier

Dr. J. P. Stewart
Northumberland Co., Pa.

If the prices of apple barrels keep on soaring, their use in the packing of such a plebeian product as apples will soon be a lost art. We thought they were high last year, when they had practically doubled in cost over the preceding year, with an average price of about sixty-five cents. This year, however, a dollar fifteen is already considered very cheap, and a dollar and a quarter or even a dollar and a half for first-class barrels has been asked in current quotations. With the leading men in the apple buyers' associations passing out the tip to the general public that the average price of good apples this year is likely to run around five and a half a barrel,—when that was about the low figure last year,—it will be readily seen that the outlook for the real producer is not exactly the rosiest possible, just at the present minute.

The increasing cost of barrels, however, will naturally tend to restrict their use, and will make it still more important that those which are used be utilized to the best advantage. For the assistance of those who may not be entirely familiar with the best practice in this respect, we therefore offer the following suggestions.

Securing the Barrel

In selecting the barrel, it should be remembered that a really first-class barrel is clean and smooth looking, both outside and inside; that it has relatively few pieces in the heads, usually about three; and that it has a good deep groove or croze ring to receive and hold these head pieces in place. It is also well to avoid head pieces made of chestnut, so far as possible, as this material is too easily split. Poplar, birch or gum are all preferable for this purpose. In the past, some exceptional growers have used barrels with double quarter hoops, thus making eight in all instead of the more normal number of six. With the extraordinarily high current prices on wooden hoops, however, this will doubtless be regarded as an unnecessary extravagance, and it is likely that even the single wooden quarter hoops will be replaced generally by the wire hoops, which are both cheaper and stronger.

Barrels are generally delivered with both ends in and all hoops in place, but with none of them nailed. This avoids warping in storage. A carload of such empties will contain from about four hundred to five hundred barrels, and will carry from 150 to 200 barrels after they are filled.

Coopering

Before using, all barrels must be "coopered," as it is called. In doing this, one should first examine both ends, and select the one with most pieces, or the one that is smoothest, in case the number of pieces is equal, and nail this end in firmly. Four-penny nails, either cut or wire, are best for this purpose, and they should be driven thru the top hoops at an angle of about 45 degress, and left with the lower edge projecting slightly so that they can be easily removed for examination later. The nails should be placed so as to catch the long tips of the two shortest pieces in the head, and should be slanted so as just to appear slightly in crossing the upper edge of the croze ring. Four nails properly driven are usually enough to hold the head, but two to four more may be used when really needed. More than six nails, however, is usually a waste. For export trade, or where unusually severe handling is anticipated, the heads should be additionally strengthened by the use of "liners," which are thin strips of gumwood, nailed on the inside of the staves, and so placed as to catch the ends of all the pieces in the head. It is well to keep these liners soaking in water before use, to reduce splitting. The same system should be followed in nailing the other end of the barrel after it is filled.

After the one head is properly nailed, the other end should be knocked in and left in the bottom of its barrel until needed, and the quarter hoops should be tightened and fastened in place with a nail in each hoop on each side of the barrel, or else stapled similarly in case wire hoops are used. The nails in the wooden quarter hoops should be clinched in all cases.

Facing

When ready to pack, remove the loose head and place it beside the barrel, put in a corrugated paper cap with the rough side down, and start the "face." This is done by arranging the fruit in concentric rings, and may consist of either one or two layers, the latter or double face being used occasionally for especially fancy fruit. The fruit is packed stem down in the first layer, and special care should be used to get fruit of uniform size and color for this layer, and to see that each ring is closed up completely, which can be done by slightly varying the size of the fruit in the ring when necessary. When the single face is used, the spaces between apples are usually backed up with a layer of "spotters," so placed that they show up to the best advantage thru these spaces when the barrel is opened, and they also help to keep the bottom layer in place when the balance of the fruit is poured in. The double face has no advantage over the single face properly arranged, and it is therefore likely to be simply a waste of time.

The practice of facing has been so much abused in the past, by the use of fruit so much superior to that in the remainder of the barrel, that considerable sentiment has been developed recently toward requiring the face to represent fairly the remainder of the pack, and legislation to that effect has been passed in Pennsylvania so far as size and general quality are concerned. It is still possible, however, to use fruit of considerably better color in the face, if desired, and this is apparently still expected in the trade.

Filling the Barrel

After the facing is finished, the remainder of the fruit is put in carefully, either by means of canvas or burlap aprons or with swing-handled half-bushel baskets,—and is settled into place by frequent shaking or racking of the barrel, preferably after the addition of each half or three-quarters of a bushel of fruit. This racking is the most important factor in getting a tight pack, and can not be replaced by any other practice. When the racking is done properly, the barrel need be filled only slightly more than level full, or at most not more than a half inch above the level in order to obtain a tight pack, and when filled higher than this under any conditions, the result is simply a lot of severe bruising all thru the pack.

For the fanciest grades, an additional ringing may be used at the "tail" of the barrel. This is done by arranging the apples on their sides at the finish, so that their cheeks rather than their stems appear when this end is opened. Whether the ring-tail pack is used or not, it is important to level the fruit off at the height desired before pressing in the head. This is greatly facilitated by the use of a circular "shaker" or "follower" made of 2-inch plank slightly smaller than the tail of the barrel, with a handle on top and thickly padded underneath. This shaker is applied to the full barrel before the final racking, in the case of the ordinary pack, but is applied somewhat before the barrel is full in the ring-tail pack, and in the latter case the fruit is leveled down just enough for the last layer to come up to the desired height.

Another corrugated pad should be placed over the fruit before the head is pressed into place, and if the pad is omitted at either end, it is better to retain it here, as this is where the danger of bruising is greatest.

Barrel Presses

Two types of presses are available—the screw press and the lever press. The former is somewhat slower, but it exerts a steady and even pressure that is far easier on the fruit than the action of the latter, and is therefore usually preferred by most growers. It is best equipped with a platform,—which may be home-made very readily, in order to avoid breakage or displacement of the hoops on which this press would be otherwise attached.

Stencilling the Barrel

In the stencilling, the information really required is the name of the variety, the grade and minimum size of the fruit, and the name of the packer or of the party in whose interest the

(Continued on Page 10.)

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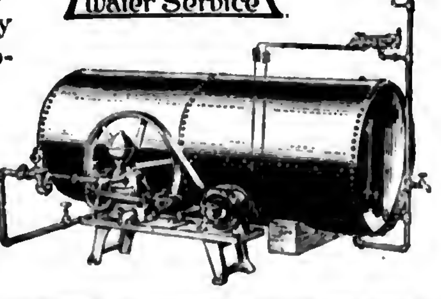

BEE-KEEPERS STUDY DISEASES

A large number of the beekeepers of New York are availing themselves of the opportunity to learn more about beekeeping. Beekeepers societies have arranged demonstrations for the purpose of studying diseases and methods of treating them.

The amount and the kind of diseases varies as to localities. In Cayuga County which is the leading honey producing county east of the Rockies, there is practically no disease. In this county the local beekeepers association is very active in helping its members. The members in turn believe nothing is gained unless one helps himself. This sort of policy is keeping the Cayuga County apiaries free from disease.

Bee Disease Treatment

American and European foul brood are the two bee diseases most costly to the beekeepers of the state. In speaking of these two diseases, Prof. Rea says: "Wrong diagnosis of the American foul brood and European foul brood is costing beekeepers thousands of dollars each year. The two diseases are distinctly different in their symptoms and treatment. Every beekeeper who wishes to know more about these diseases should carefully study Farmers' Bulletins Nos. 975 and 1084 issued by the U. S. Department of Agriculture at Washington. Also professional papers Nos. 809 and 810 by G. F. White from the same department. A sure method of diagnosis is to send a sample of the disease brood to Dr. E. F. Philips, Bureau of Entomology, Washington, D. C. After a miscroscopic examination Dr. Philips' office will give the beekeeper free of charge an absoluto sure diagnosis. A special box for sending the disease sample may bo obtained by writing Dr. Philips."

Studying American and European Foul Brood in New York

In discussing the treatment for European foul brood, Prof. Rea says it can be prevented and cured by the introduction of good Italian queens and keeping the colony clean by better bee keeping methods. No destruction of combs or disinfection of equipment is necessary.

American foul brood is much harder to control. The method used by Prof. Rea in treating this disease is to shake the bees on clean combs in clean hives. All affected combs must be destroyed and all equipment thoroly disinfected.—E. C. Weatherby.

WHY GIRLS NEED TRAINING IN ECONOMICS

(Continued From Page 1.)

"Certain clothing work should not be attempted in the home. No woman uses a great enough number of tailored garments in any one year to pay her to attempt to be skillful in making these, but she should be trained in buying these garments.

"When standardized dress is suggested, uniform dress must never be thought of. There is need of certain standards of dress for women in industry, business, and the professions. Such standard dress would enable women to secure better materials and workmanship with enough variation to express personality.

"Women need to know materials, have correct standards of good taste, be intelligent in the purchase of materials and skillful in the making of the garments. They may or may not make a considerable portion of their wardrobe as their personal affairs make advisable. They will in all cases need to repair certain garments and extend their use. A wise consumer worketh good alike to the producer and the merchant.

"All that has been said concerning intelligence in the choice of garments and garment material can be said also in relation to the purchase and use of household linens, carpets, bedding, and draperies.

"If home economics education attains the place that its advocates desire, the lasting effect may be stated as follows:

"1. More careful buying, and consequently, fewer returns to the retail merchant.

"2. Greater appreciation for good workmanship, design, and materials.

"3. Fewer sales, but better goods sold.

"4. Lessened loss because of uncollectible bills because of women's training in household business management and in more careful trading.

"5. Fewer purchases of excessive or adequate quantities of material with a subsequent result of dissatisfied customers.

"6. A greater demand for standard materials and designs with a subsequent decreased return of unsold goods to the wholesalers.

"7. A greater national financial welfare because of any condition which beneficially affects the majority of American homes affects the entire country. Only for a limited period can any group prosper by exploiting a considerable percent of their countrymen.

"If 20,000,000 women buy what they do not need, and can not afford, and if their taste is perverted and their standards lowered, then a reaction is certain—debts are unpaid, savings are consumed, consumption drops below normal, and industry ceases.

"Unwise buying may stimulate certain types of production, may, indeed, temporarily stimulate business, but the reaction that follows unintelligent consumption brings collapse of credit and destruction of business. That which is destructive of the prosperity of the consumer is ultimately destructive of both producer and distributor.

FOREST CONSERVATION—WHAT IT MEANS

By Gifford Pinchot, Chief Forester of Pennsylvania

Conservation does not mean the holding back of production. It does not mean hoarding.

What conservation does mean is the wise use of whatever is to be conserved. The conservation of natural resources, which have been given to all the people by the Almighty, means their use in a way that will benefit the greatest number of people for the longest possible time.

Unless we practice conservation in foresty we shall drift—if we do not plunge—into a scarcity of wood that will amount to a timber famine, the effects of which will be felt by every man woman, and child in America.

During the war there was immediate demand for supplies of every kind, and there was much waste. Waste comes naturally with war. Therefore, what was done during the stress of war times may now be overlooked, but may well be used to point a moral.

There was extraordinary demand for mine props when the call for coal came. People saw the chance for big and quick money. They rushed in the axemen and down came the trees. Thousands of acres of young growing timber were devastated.

Young trees that had weathered their roughest years and were on a rapid road to real value were hewn down and hurried to the mines, and in cutting them no protection was given to the trees that remained. The result is that as timber producing areas the woods that were cut over were thrown back fully fifty years.

While this was being done there were left standing in the forests many times more than enough trees of proper sizes and kinds to supply the mine props that were furnished locally, and do it without devastation. Young chestnut, subject to blight, which ought to be cut to protect and develop the forest, could have been had in great abundance, and other usable growth as well.

All this happened in war. But in normal times this sort of lumbering is inexcusable—yet it did not stop when the fighting was over. Pennsylvania has far too much of it now. It is the duty of the people to protect themselves against this and every other form of needless forest devastation.

The exercise of the public's powers along such lines as this is necessary for real conservation. Understanding of the situation on the part of the people, and the sure appreciation which comes with understanding is what we need to make conservation an effective thing.

We must keep the land which is good for nothing except to grow trees busy growing trees, for that is the wisest use that can be made of it, and the wise use of a natural resource is conservation.

The corn crop of the United States is grown on about 100,000,000 acres with the expenditure from first to last of the equivalent of over 300,000,000 ten-hour days of human labor.

Try an old whisk broom for spreading spray materials on the insect and disease infected plants of your backyard garden.

What is a bigger help in dish washing than a drain board in the sink? Answer: Double drain boards!

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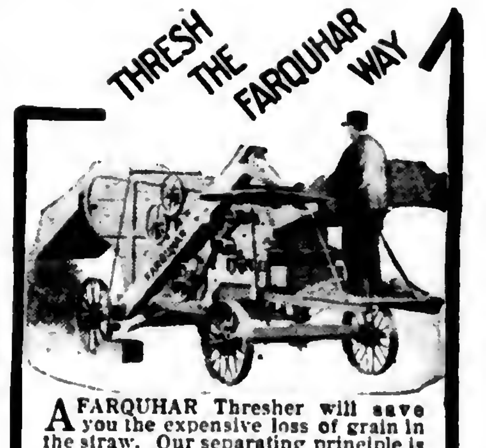

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ESTABLISHED 1880 PUBLISHED WEEKLY

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PHILADELPHIA, PA., SEPTEMBER 18, 1920.

VOLUME 48 NUMBER 12

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Home Economics

THE PEOPLE of a generation ago and before scarcely knew the meaning of the word economics, yet the majority of people of that day were economists to a greater degree than are those of today. Consumers were closer to the source of the things they used than they are now. They had a chance to learn at first hand by seeing or participating in the creation of the necessities of life. In this age of specialized industry comparatively few people know the system or understand the process by which the articles of everyday use produced. In order to get the knowledge which those of former generations received from participation—knowledge that is necessary to intelligent buying and use—young people must have school training, and we call such training the study of economics. The article on first page of this issue should be read by every parent. We believe it will help to convince the doubting case as to the need for the introduction of such courses in their neighborhoods. We will admit that the average farm-raised girl has greater opportunities in some directions for obtaining part of this practical knowledge, yet there are other lines in which she needs instruction in economics quite as much as her city cousin.

The Japanese Beetle

THE DAILY PAPERS carried the information the other day that the Federal Department of Agriculture would establish a quarantine on the states of Pennsylvania and New Jersey, preventing the shipping of farm, orchard or garden produce in an effort to stamp out the Japanese beetle. Believing such an act unwise and unnecessary the editors of this paper sent a telegram protesting against such an order. We received the following answer promptly which we are glad to publish to partially counteract the misinformation disseminated by the daily papers:

"In response to your telegram of September 9 you are advised that my restricting imposed as a result of the hearing yesterday on account of the Japanese beetle will apply only to the areas actually infested, and provision for movement of all products restricted in such areas will be made under inspection and certification. A similar quarantine now in force over a small area in New Jersey has proved no obstacle to any business enterprises involved; on the other hand, it has been of distinct benefit in making it possible to ship products interstate which would otherwise have been denied by state quarantines. The proposed quarantine was fully discussed at the hearing yesterday with representatives of all important interests concerned. The objection to the proposed action was largely due to a misunderstanding; in other words, to the belief that the quarantine would amount to an embargo. The decision at the conclusion of the hearing on the part of the various representatives present was to leave the determination of action entirely in the hands of the Department. The exact terms of the quarantine must await the final consideration of this Department."

(Signed) E. D. BALL,
Acting Secretary of Agriculture.

Co-operation vs. Corporations

A FEW WEEKS ago we published an outline of a plan presented to the Chicago meeting of the American Farm Bureau Federation for a wheat marketing organization. The plan as outlined was patterned after the California Associated Raisin Co., and was presented and explained by a Mr. Sapiro of California, attorney for the Raisin Company. If the plan should be adopted by the wheat growers it would mean the attempt to sign up the growers of 51 percent of the wheat, or more, into a selling organization. This would give the association control of the wheat market and enable it to have a voice in setting the price. The Farm Bureau Federation voted that a committee of seventeen be appointed by the different national farm organizations to investigate the subject and report later. We understand that the National Board of Farm Organizations at its Columbus meeting refused to appoint its apportion of the members of the committee of investigation.

During the week following the Chicago meeting referred to, the Federal Trade Commission reported that the California Associated Raisin Co., was violating the spirit of the anti-trust law and was in some respects a monopoly in restraint of trade. On September 9, Attorney General Palmer ordered the United States District Attorney at Los Angeles to bring suit against the Raisin Company as a company acting in restraint of trade. The charge is that contracts with growers were obtained by giving the corporation the appearance of a co-operative association, and further that the corporation forced dealers to handle its products.

We have thus reviewed this matter at length because of the wide publicity the proposition attained, and also because of its suggestiveness. There is general agreement amongst farmers and intelligent people not farmers that the greatest need for all concerned is a plan by which tho farmers can market co-operatively and thus eliminate unnecessary selling costs so that the producer may receive a larger return and at the same time reduce the final price to the consumer. But the case cited above forcibly suggests that all such organizations must be purely co-operative in character and without the ear-marks of a monopoly acting in restraint of trade. The spirit of American people resents the latter practice and will not tolerate it in farmers more than in manufacturers. There is no doubt but what a lawful and perfectly justifiable plan for co-operative selling organizations can be developed and farmers are perfectly capable of creating them if given the needed legislation. The formation of a heartless monopoly is farthest from the average farmer's mind.

Campaign Issues

VERY LITTLE heavy artillery has yet been opened in the political campaign. The Republican and Democratic candidates for president have made a few speeches, but as yet have not touched upon any subject that has aroused more than a passing interest in the minds of the people. Campaign contributions, mild reference to the tariff, and dissimilar views on the treaty have been the subjects receiving most of their attention. The question of agriculture has been quite exhaustively and satisfactorily treated by both candidates. Both Senator Harding and Governor Cox have declared themselves as being strongly in favor of having farmer representatives on the important federal boards and commissions. They have also pledged their influence, if elected, towards the enactment of laws legalizing farmers' co-operative associations, and other legislation having for its purpose the improvement of agricultural interests.

Prohibition Enforcement

IT HAS BEEN STATED by an authoratitve source in sympathy with the prohibition law that the act is from 50 to 85 percent effective. To state it in another way, the use of alcoholic liquors today as compared with what it was before the law became effective is from 15 to 50 percent as great as it was then. The illicit traffic and use being smallest in rural communities and greatest in the cities. The question naturally arises in the mind of the respectable, law-abiding citizen, "Why is the law not better enforced?" There is but one answer, and that is that the Department of Justice under Attorney General Palmer has miserably failed to carry out the provisions of the law. Every drop of liquor now used and passing in illicit traffic was in the keeping of the government when the law became operative and there was no way to get it except it be released by governmental authority. Nobody believes that the officials are such dupes as to believe that all that is being released and handled is required for medicinal purposes. The average person is naturally led to believe that the coming election is real reason for the lax enforcement of the law.

How Much Insurance Have You?

A FARMER whose barn was burned recently told us that his insurance money, including that received for its contents of machinery and crops, would not be half enough to rebuild the barn alone. We are under the impression that this would be true in the case of most farmers, should they be so unfortunate as to have their buildings burned. In the majority of cases farm buildings are insured for much less than their real value in the first place and the original valuation has been carried along for years. In the meantime, the cost of building material and labor has steadily advanced so that the value placed upon them five, ten, or fifteen pears ago is only a fraction of what it would cost to replace them now. There is little prospect of any great reduction in building costs, and it would be exercising only good business sense to have the old polices cancelled and new ones made, or, to have an additional amount placed upon the old one where this is possible. The old maxim holds good here: "Whatever is worth doing, is worth doing right."

Our Washington Letter

Many organizations are claiming credit for winning the victory for woman suffrage. "Labor," the Plumb plan publication, says: "The victory for complete enfranchisement and citizenship of women in the United States has been gained thru the steadfast support of men and women of organized labor." The grange has a justifiable claim of being a leading factor in the success of the woman suffrage movement. Speaking of grange achievements, A. M. Loomis, secretary of the Washington office of the National Grange, says:

"One by one the fundamental principles upon which the grange was built and which were written into its organic law by its founders and the broad visioned men by whom they were surrounded in the early hard days of grange history, are being written into the organic law of the nation. Two of these principles stand out distinctly because of their incorporation into the constitution of the United States, almost within the twelve months, prohibition of the manufacture and sale of alcoholic beverages, and the guarantee of full suffrage rights to women. These two principles were in the first conception of grange organization and belief. It may be asserted on reasonable grounds that the grange was the first national organization in favor of woman suffrage, and it was one of the first to favor effective legal prohibition of the liquor traffic."

* * *

Evidences are coming to the surface daily that organized labor is taking an unusually active part in the election campaign this fall, and by diligently emphasizing the political power of labor organizations the leaders are able to make a strong impression upon the campaign managers and the candidates for office. So-called "unfair" candidates for Congress and the Senate in all parts of the country have been blacklisted, and efforts are being made to rally the labor rank and file to the support of the "fair" nominees. A determined and widespread effort is being made to organize the women voters whose interests are identified with union labor. Four women candidates for Congress are backed by organized labor and the Plumb Plan League, which is making a strenuous appeal to the railroad men's wives and the women employed in railway offices.

* * *

President Samuel Gompers of the American Federation of Labor has assailed the proposed amendment to the Nebraska state constitution providing for an industrial commission to pass upon disputes between employers and employes, indicating that organized labor is going to bitterly oppose any form of compulsory arbitration of labor and capital controversies. The farmers' votes are being sought by the labor candidates on the grounds that "the interests of the wage workers and the farmers are identical," but reports I am

receiving do not indicate that any considerable number of farmers, outside of a few localities in the Northwest, are being led into the political labor movement.

* * *

With from 15,000 to 18,000 aliens arriving at the port of New York each week, many coming from typhus infected regions, the immigration officials are urging the necessity of a law which will place effective restrictions around immigrants at the port of departure. It is the belief of many students of the situation that this is a subject which may well engage the attention of farmers' organizations and the farm press. They maintain that the present influx of vast numbers of foreigners is not only endangering the public health, but the social welfare of the republic.

* * *

Another matter which is engaging the serious attention of farmers is the decrease in exports and rapidly increasing importation of farm products. A review of foreign trade shows that "since the beginning of 1920 the decline in our exports has been entirely at the expense of raw materials. In fact the outward shipments of semi-manufactured materials and finished goods during this period show a progressively increasing ratio to total exports." The Department of Commerce reports present figures showing foodstuffs imported into the United States during the first seven months of this year to the value of more than $500,000,000 greater than during the same time last year, while export foodstuffs showed a decrease of upwards of a half billion dollars during the same period. When the Tariff Commission and Congress get down to work on tariff revision it is probable that American farmers will demand a readjustment of trade laws and rules which will give their product a better standing in the markets of the world.

* * *

The census reports now being issued are bringing to light facts concerning the shrinkage in farm population, which are sufficient to cause serious alarm. A study of the New York state township census reveals the unwelcome information that in some of the best farming districts in the state the population is little more than one-half what it was forty years ago. Nearly all the small villages have lost in population, and for the first time the larger rural villages show a decline in population as a direct result of the loss of farm population. Vermont, which, owing to the growth of its cities has always shown a growth of population, in spite of the shrinkage of farm population, has had a decline in number of inhabitants in the last ten years. Some of the smaller cities in the East which are largely dependent upon the farming country for their support are also on the decline.

* * *

Commissioner of Immigration Caminetti hopes to solve the farm help problem, the abandoned farm problem and the immigration problem by diverting immigrants now arriving in the United States to the farming districts. In an announcement by the Bureau of Immigration, Commissioner Caminetti says: "The farm labor problem is many sided and difficult; but we ought to find a solution, because any of the immigrants we are now getting are farmers. We are planning to greatly enlarge the immigration employment bureau. We will take the initiative in directing the immigrant into the field of greatest usefulness. When the immigrant becomes a successful farm worker he is anchored to this country and never dreams of going back to his native land."

* * *

Washington representatives of the National Board of Farm Organization report a successful meeting of the affiliated societies at Columbus, O. Resolutions were adopted urging Congress to revise tariff legislation to include a protective duty on all oriental vegetable oils and other raw commodities when their free importation acts adversely to the interests of American farm producers; that a practical farmer acceptable to the federated farm organizations be selected as secretary of agriculture and that farmers be recognized in the appointment of governmental boards and commissions; for the removal of all discriminations which make it impossible for the formation of co-operative associations of producers and consumers, and that co-operative marketing organizations of farmers engaged in inter-state commerce be given the same privileges as are enjoyed by private enterprises under similar conditions.

* * *

The Board went on record as favoring national control over the packers and the enactment of legislation that will prevent the packers and other private corporations from owning or operating rolling stock over the railroads. A protest is voiced against the neglect of the railroads to supply refrigerator cars, as such neglect tends to centralize the distribution of perishable foods, such as meats, butter, fruit, eggs, vegetables, etc., in great private corporations, and makes it inconvenient and generally impossible for farmers' co-operative marketing associations to efficiently market their products, and thus compete with the members of the American Institute of Packers. All this tends to discourage production and widens the gap between producers and consumers. We urge Congressional action which will compel railway companies to supply such cars."

* * *

The Washington Farm Bureau office is working in co-operation with other organizations to secure as early as possible the appointment of the special committee authorized by Congress to hold a judicial investigation of the subject of rural credits, in order that this hearing may be held immediately after the election in November.—Elmer E. Reynolds.

HARRISBURG LETTER

More Money For Schools.—It is becoming very apparent that the next legislature will be called upon to make appropriations for education in Pennsylvania in figures far beyond anything ever known. It is believed the next legislature will have well on toward $90,000,000 to appropriate, but experience of the last decade has been that there is always double the amount in sight asked. It is possible that some changes in the form of appropriations will be made. Specific appropriations for conduct of the schools, for teachers salaries and other expenses will be made; the expenses of the state government will be more closely itemized and will be higher; large sums will be voted for roads, forests and similar projects, and the construction of new buildings to house state offices now in expensive rented buildings will be continued. The charities will all be in, state and corporate, for more money because of increased cost of living. In this situation it will be essential to get the agricultural and educational programs well in hand and meetings to be held the rest of the year afford opportunity to crystallize sentiment well in advance of the legislative sitting.

Some School Projects.—Greater attention will be given to health education in the state's schools here after and important courses are being outlined with people to supervise them; the vocational training will be enlarged; the whole plan for teacher training be overhauled and some new means for aiding the poor districts be devised. Some sentiment is being expressed for a change in the scheme of distribution of the state funds. The way it now operates it is distinctly favorable to the cities and larger boroughs when the smaller communities need it most. Probably 100 projects for consolidation of schools are now under way and this work will be carried on thruout the winter. School standards will be set up in some well adapted districts and a drive made for better school houses. There are about 1,500,000 school children to be cared for in Pennsylvania.

Medical Inspection.—From what has been heard at the State Capitol medical inspection is in force in virtually every school district in the state and this year there will be inspection of almost every child in the schools. The inspection work has been started in every county and early reports are said to show good results from previous years. Incidentally, the compulsory attendance act is being more closely enforced this year than ever.

For Prison Farms.—Plans for a farm at the Huntingdon reformatory to be operated as has been the successful farm at the new western penitentiary in Centre County are being made by the State Board of Public Charities. It may be added that results obtained in Centre County are being followed and data gathered as to what was accomplished on the various farms in the state conducted by county prisons and poorhouses.

Employment Bureau Helps.—From what officers of the State Employment service say the plan of having designated days each week on which men can meet at employment offices and discuss employment with farmers, orchard owners and cattle raisers is working out very well and numerous farmers have secured needed hands at important times. This idea will be made permanent and it is hoped to bring about an improvement in the farm labor situation in the spring. Just at present the calls for help in the apple and peach orchards of the state is very strong and if reports are correct not all of a bountiful crop can be gathered.

Apple Survey Ends.—The state apple survey has been completed and data which it is predicted will be surprising as to extent, investment and other features of the state orchards has been assembled. The results will be printed during the fall, information as to localities having been already made public at county seats. The peach survey, designed to get rid of the "yellows" has developed numerous trees affected and some stringent measures to halt the spread are said to be essential.

Favor Dockage.—The Bureau of Markets of the State Department of Agriculture has suggested the adoption of the dockage system for wheat in Pennsylvania, believing that it will better the grades and provide what is needed in the way of a basis for comparison. A discussion has been invited by the Bureau.

Going After Back Licenses.—The Department of Agriculture has let it be known that it does not propose to stop with enforcement of the dog license law now, but will go behind the returns. Farmers who persist in defying the law will find themselves confronted with suits not only for 1920, but for past years, which the state can start any time.—Hamilton, Harrisburg, Sept. 13.

NEW YORK LETTER

Food Problem Solution.—The conference this week of the State Council of Farms and Markets with representatives of transportation companies bankers and farmers disclosed the fact that distribution of foods is the most serious difficulty facing the nation. A resolution was passed instructing the Council and Commissioner of each division to work out a permanent farm policy for the state and a program which will insure its execution. S. L. Strivings, president of the State Federation of County Farm Bureaus sounded the keynote of the situation when he said "How can we make our fundamental industry so prosperous as to insure its perpetuity?" It was shown that the spread between producer and consumer is so great that agriculture is being permanently harmed. Cabbages sold by the farmer for 2c a head are sold in New York markets for 15c a head. A serious shortage of milk was predicted because milk prices fell so low last spring that too many calves were sold for veal, thus cutting off largely the future supply of milk. The banks promised extension of credit to farmers, and representatives of railroads pledged aid. The food problem solution lies wholly within present state power of police, given the desire to solve them, says one of the candidates for the governship of the state.

Swine Notes.—New York state swine exhibitors at the state fair are nearly double what they were last year. Entries show the Duroc-Jerseys to be most popular with Berkshires next.

Farm and Home Bureau Rally.—A rally of farm and home bureau members will be held the second day of the state fair, where a campaign for 150,000 members will be started. Rural and small towns papers are giving publicity and motor party delegations from each county are being organized. A series of meetings will be addressed by: J. W. Coverdale, secretary of the American Farm Bureau Federation, Geo. E. Hogue, the new state commissioner of agriculture, Mrs. A. E. Brigden, president of the State Federation of Home Bureaus. Dr. Ruby Green Smith, state leader of home bureaus, and Miss M. B. Van Aredale of Columbia University.

New Price on Milk Contracts.—There is much uneasiness on the part of dairymen regarding the prospects of better prices for milk during the next contract period. A conference of directors of the Dairymen's League is called in Ithaca on September 13, to discuss the situation. A study of cost production shows that $4 or not far from it should be secured. Production costs have risen rapidly and will do so for the next few months. Buyers are hinting that no advance in price will be made and the closing of important milk receiving stations is announced.

NEW JERSEY NEWS

Observe Tomato Results.—Results of a tomato demonstration conducted by the Mercer County Board of Agriculture in co-operation with the State Experiment Station were obtained at a largely attended and most successful meeting held at the Fernando Blackwell farm in the Pennington agricultural zone. Tomato growers from many points in the Northern part of the county were in attendance. Five one-quarter-acre patches of tomatoes were fertilized and sprayed in different ways. A plot on which 500 pounds of 2-8-2 fertilizer and four tons of manure per acre were applied together with the most approved method of spraying showed very conclusively that the extra expense for spraying and fertilizing had more than paid for itself. The plot was sprayed five times during the summer with Bordeaux mixture to control streak, blight and other tomato diseases. Tobacco extract was added to two of the sprays to control tomato lice.

State Poultry Show.—The Annual State Show of the New Jersey State Poultry Association will be held at Trenton again this year, but independent of "Agricultural Week." This action was taken for the following reasons: Because the date of "Agricultural Week" brought the poultry show into conflict with the Boston and Madison Square Garden, (N. Y.) shows; limited space allotted the poultry exhibition; the express congestion and impassable condition of the public highways in New Jersey during the month of January when the show was held in past years. The dates assigned for the show are November 30 to December 4. This will mean that the show will have the entire Second Regiment Armory to fill with poultry, pigeons and pet stock.—Kelly, Sept. 11.

Police the poultry ranges persistently during these hot days. Birds that die unnoticed in the tall grass or weeds are a constant source of that summer poisoning which takes so large a toll from the flock.

The Pennsylvania apple growers, as a rule, lack proper storage facilities.

FAIR DATES FOR NEXT WEEK

Place	County	Date
Pennsylvania		
Allentown,	Lehigh,	Sept. 20-25
St. Mary's	Elk,	Sept. 21-23
Altoona,	Blair,	Sept. 21-24.
Hanover,	York,	Sept. 21-24.
Grampian Hills Juvenile Fair,		
Grampian	Clearfield	Sept. 21-24
New York		
Batavia,	Genesee,	Sept. 21-25
Mineola,	Queens,	Sept. 21-25
Vernon,	Oneida,	Sept. 23-25
Palmyra,	Wayne,	Sept. 23-25
New Jersey		
Branchville,	Sussex,	Sept. 21-24.
Morristown,	Morris,	Sept. 23-25.

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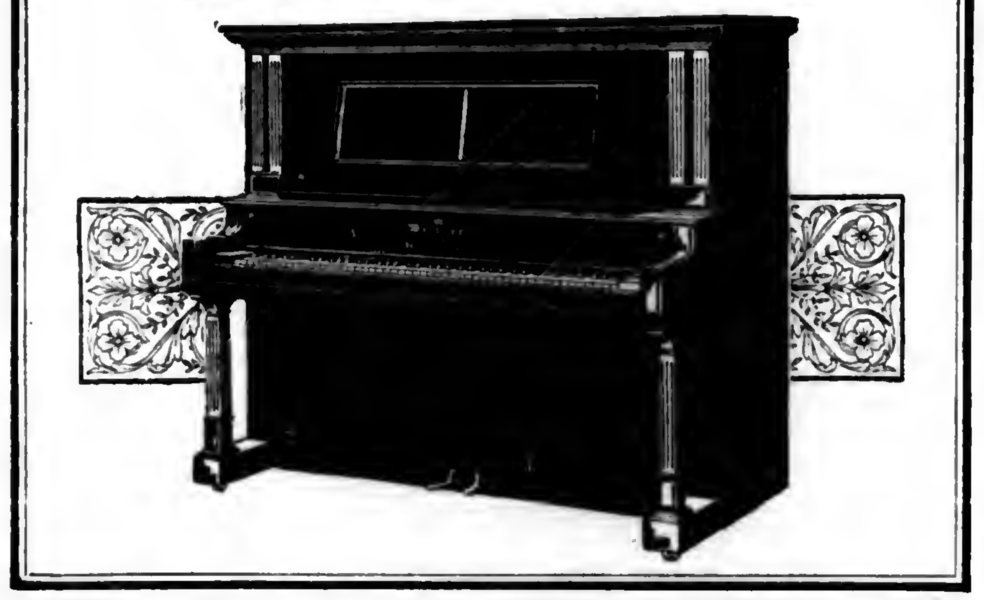

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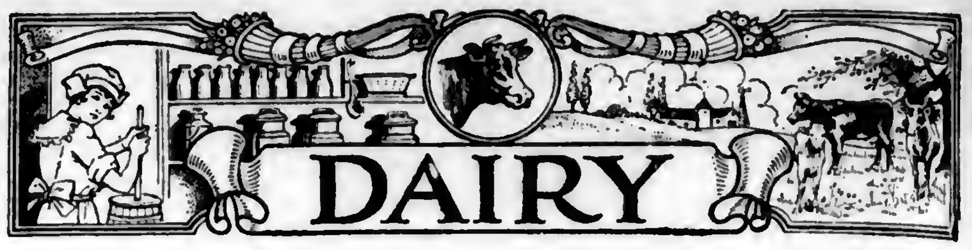

DAIRY

UPHILL OR DOWN?

Do You Use a Pure Bred Bull or a Scrub?

Progressive farmers and dairymen have learned that by organizing Milk Producers Associations they have been able to divert many dollars into their own pockets that would have gone to the coffers of the milk dealers. If they had not been united. However, milk producers as a whole, have not yet come to a full realization of the tolls that are exacted by the scrub bull. Someone has lately coined the term, "Bulshevik," for the renegade of the bovine world, and if that word can convey all that describes what is a meance to the prosperity of the dairy industry, the scrub bull deserves this new name. Scrub bulls and scrub cows form an endless chain, for like produces like, and with the increasing rise in the cost of milk production, the keeper of these two types of animals is going down hill financially just as fast as the cost of production increases. To make a profit nowadays, the dairyman must be on the alert to increase efficiency in production.

Ayershires on Druckemiller Farm, Northumberland Co., Pa.

There is no reason why any milk producer cannot run his dairy on efficient lines. If he wants to improve a herd of eight or ten cows, or more, he needs only one pure bred bull to do so.

One often hears the small farmer say that he cannot afford to buy a pure bred bull for his few cows. Wherever possible it is best for several small farmers to buy a good bull, or to join a Bull Association, by which each member has the use of a high class bull at a cost much smaller than he could buy even a mediocre animal. Where both of these arrangements are not available, it will pay the owner of eight cows or more, to get a pure bred sire. Let us assume that he pays $150 to $200 for a pure bred bull calf, and uses him for about three years. Altho the pure bred will not consume more feed that a scrub we will add about $300 for feed cost, which will bring the final cost of keeping the bull, instead of taking the cows away for service, at $500. For the indicated price one should be able to secure an animal of breeding that has a production average of about 8,000 to 12,000 pounds of milk, and from 300 to 400 pounds of fat, depending on the breed.

If the bull is good he should, if mated with average farm cows, produce an improvement of at least 20 percent in the heifers over the best performance of their dams. Countless Cow Testing records show that the average improvement is around 40 percent with as much as 100 percent not uncommon. If the bull is used on a herd of cows that averages 5,000 pounds (which is more than the average), a 20 percent improvement of the heifers will give an annual increase of 8,000 pounds of milk for a herd of eight cows, and if each heifers is kept for five years of actual production the increase due to the bull will have been 40,000 pounds of milk. At present prices this amount of milk will have a value of approximately $1400, if $3.50 a hundred is secured. Furthermore each female offspring of the original cows and also of the daughters and granddaughters will be of higher quality than would have been the case if a scrub sire had been used.

The above example may sound theoretical, but several hundred thousand cow testing records, secured by testing association all over the country for the last ten years or more show that if a pure bred bull of known productive ancestry is used, the offspring rarely fail to show great improvement. Of course, there are some pure breds that are also Bulsheviks of the worst order, but there is no more need of buying such animals than there is to buy a slow race horse, simply because in these days of high-class, reliable breeding establishments and extension workers, any farmer can get a fine animal at a reasonable price, with the assistance of the county agent or the cow tester.

What is a good bull worth? A recent writer in Hoard's Dairyman gave a few examples from his own experience. Golden Shylock, a Jersey Bull, was used in a herd of eight cows, and 12 of his daughters showed an average increase of 42 percent of milk and 47 percent of fat over their dams which themselves were good cows. A Holstein bull, Prince Ormsby Mercedes De Kol, was used for several years and got so mean that his owner sold him just about when the heifers were beginning to calve. Now the owner wishes he had kept Prince, whose daughters, only three of them, gave 25,000 pounds more

milk and 1,340 pounds more fat in three lactation periods than the dams did in the same time. Another Holstein sire was put into the herd and made an increase of 42 percent of fat and 43 percent of milk, as the average of six heifers at their first calf, more than their dams did at maturity. Putting these results in the terms of real money, Golden Shylock added $2,100 to the prosperity of his owner, and the two black and white bulls, respectively yielded $1169, and $300 the first year. Shylock cost $200, Prince brought $175 from the butcher, which was $25 more than was paid for him, and the last mentioned animal cost $500, and did not bring about such a high percentage of increase because it is very difficult to bring about great improvement if the standard is already high. However, he sold for $280, so that his net cost was really only $220 after three years of service.

In short, these three bulls, at a cost of $395 over their selling price, brought about an increased profit of over $4000, which was a 10-to-1 investment, one any business man would never dare dream of. Countless records show that the pure bred bull is a safe investment, not in the same class with gold bricks, bogus oil tock and other wild cat schemes. —Paul T. Menzel.

A CONCRETE EXAMPLE

No better example of what real co-operation will do for a community can be found than that at Grove City, Pa. In referring to it as the Grove City project the writer purposely includes the town as well as the country within a radius of several miles around it. The spirit which is making a success of the undertaking is just as active in the business men, including the officers of the Grove City National Bank, as it is among the farmers.

Some four or five years ago the dairy industry in this territory was in no better shape than it was in many other farming districts where "keeping cows" is a side line to general farming. There was little or no breeding of dairy cattle, no standardized product and no co-operative activities. At that time there were only six herds having any purebred animals and only three or four purebred bulls in the community today, 162 herds are wholly or partially purebreds and there are 100 purebred bulls. There are two bull associations—one having eight bulls and the other six. Within the time mentioned the average butterfat production of all the cows in the association has increased 90 pounds; that is, the cows found in that community today have a butter production capacity which is ninety pounds per cow per year greater than the cows owned four years ago and practically all of them were bred and raised in the community. The milk of these herds is taken to a creamery in the vicinity owned by the association but managed by experts from the Federal Department of Agriculture.

For the year ending June 30, 1920, 505,009 pounds of butter were manufactured; 828,065 pounds of skim milk were condensed; 30,773 pounds of casein were made; 112,927 pounds of Swiss, 7,737 pounds of Camenbert, 12,378 pounds of Roquefort, 21,393 pounds of Cottage cheese were manpounds of Cottage cheese were manufactured.

At a picnic and stock show held by this association on September 4,

(Continued on Page 15.)

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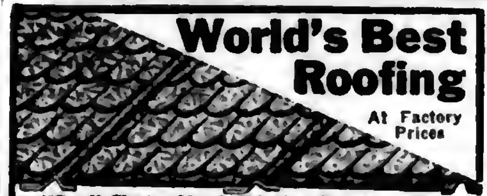

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HORTICULTURE

VEGETABLE GROWERS MEET

All the present officers of the Vegetable Growers' Association of America were continued in office at the annual convention at Columbus, O., last week, except the vice president L. F. Miller of Toledo, O., who becomes president. Mr. H. A. Dooley, president of the Cook County, Ill., Farm Bureau was elected to fill the vacancy created by the election of Mr. Miller to the presidency. The remainder of the officers are: E. A. Dunbar, Ashtabula, O., junior ex-president, Sam W. Severance, Louisville, Ky., secretary, C. W. Waid, Lansing, Mich., organization secretary, and H. J. Cheney, Grand Rapids, Mich., treasurer. The Board of Directors are: Richard Hittinger, Belmont, Mass., J. H. Rice, Ashtabula, O., M. S. Yoder, Barberton, O., Thos. Delworth, Weston, Ontario, W. B. Davis, Aurora, Ill., and J. G. Hills, Newtonville, N. Y.

There were 575 vegetable growers and greenhouse men and their wives and families in attendance. The principal action taken at the meeting was the formulation of plans by which the Vegetable Growers Ass'n of America will work in harmony with the American Farm Bureau Federation. Regret was expressed over the death of the Hon. James Wilson, former Secretary of Agriculture and action was taken to continue the work of seed standardization now in progress.

Another large cooperative selling organization, that of the canning crops producers in the various states, was put in motion at a special meeting held last week in Columbus at the close of the twelfth annual convention of the Vegetable Growers' Association of America. Representatives of the existing canning crops producers' organizations in the states of New York, New Jersey, Maryland, and Delaware met with farm bureau officials of Michigan, Ohio and Indiana and drafted the following resolution after a lengthy discussion:

"Resolved, that, those here assembled respectfully request the American Farm Bureau Federation immediately to take such steps as are necessary to organize and federate the interests of the growers of canning crops in the several states."

A committee of three, Lewis Taylor, secretary of the Indiana Federation of Farmers' Associations, chairman, Murray D. Lincoln, secretary of the Ohio Farm Bureau Federation and L. R. Simons, of the New York State College of Agriculture, was chosen to present this matter to the proper officials of the American Farm Bureau Federation and express the ideas of those who inaugurated the movement. The temporary organization which was formed for the purpose of the discussion was B. L. Ross of the Seaford, Delaware, Produce Growers' Company and the Peninsula Tomato Growers Association, chairman, and L. R. Simons, secretary.

The movement grew out of the various conflicts which the growers of tomatoes, peas and corn for the canning factories have with the factories in arranging contracts each season. Most of the tomato canning factories in New York state this year have contracted for tomatoes on the basis of $22.50 a ton while in Indiana contracts were signed as low as $15 @18. In Delaware and Maryland the 8,000 growers of the Peninsula Tomato Growers' Association are plowing under their entire acreage of tomatoes and will refuse to plant any next year unless the factories will meet the price the growers ask. The price they are asking is 50 cents a basket or close to $30 a ton, and Mr. Ross of Delaware, the representative of the 8,000 peninsula growers stated that every last man is sticking to the guns and that he is going to put the engine disk into his own 36 acres next, from which not one tomato had been picked because the factories would not pay the price which was asked.

The New York and Middle Western views were not as drastic in their intention. They propose to bring the growers of the various states in the canning crop sections together, establish a basic price with a differential adapting it to the different regions, the selling to be done thru the ultimate national organization which will be formed under the guidance of the American Farm Bureau Federation. It is expected that a conference will be called under the auspices of the National Farm Bureau similar to the recent grain marketing conference at Chicago at which the different sections will get together and formulate the proposed organization, the American Farm Bureau acting to organize the districts which are not now organized.—W. H. Lloyd.

HOW TO PACK A BARREL OF APPLES

(Continued From Page 3.)

packing is done. In addition, the use of a neat and appropriate brand name is also desirable, if the fruit is really first-class.

Subsequent Handling

After the fruit is packed, the proper position for the barrel is on its side, especially if it is to remain in place for any considerable time. Otherwise, the fruit is likely to settle and become slack at one end. It is always desirable, however, to get the fruit into market or storage as soon as possible after it is packed, as the keeping qualities are greatly impaired and the tendency to scald is greatly enhanced by even a few days at relatively high temperatures at that time. If the fruit has to be held for any considerable time after picking, it should be done in open packages, in the interest of better ventilation, which is an important factor in reducing scald, and also on account of the greater opportunities for cooling.

EUROPEAN CORN BORER QUARANTINE EXTENDED

In accordance with an order signed by the Acting Secretary of Agriculture, the Federal quarantine against the European corn borer has been extended to include additional towns in Massachusetts and New York. In Massachusetts there are nine towns and in New York are Broadalbin, in Fulton County, and Glen, in Montgomery.

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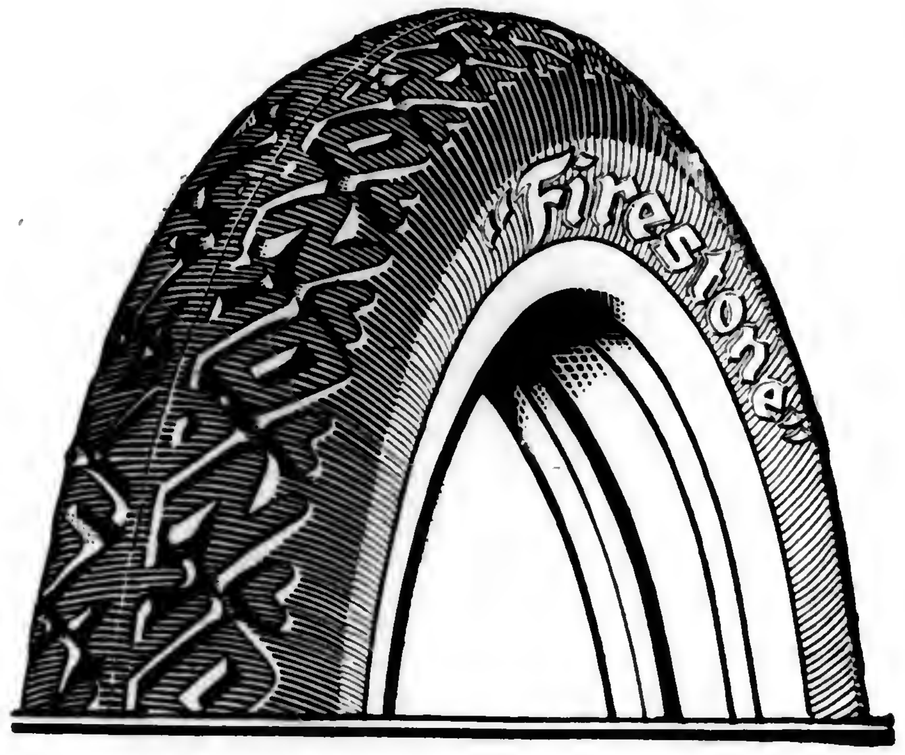

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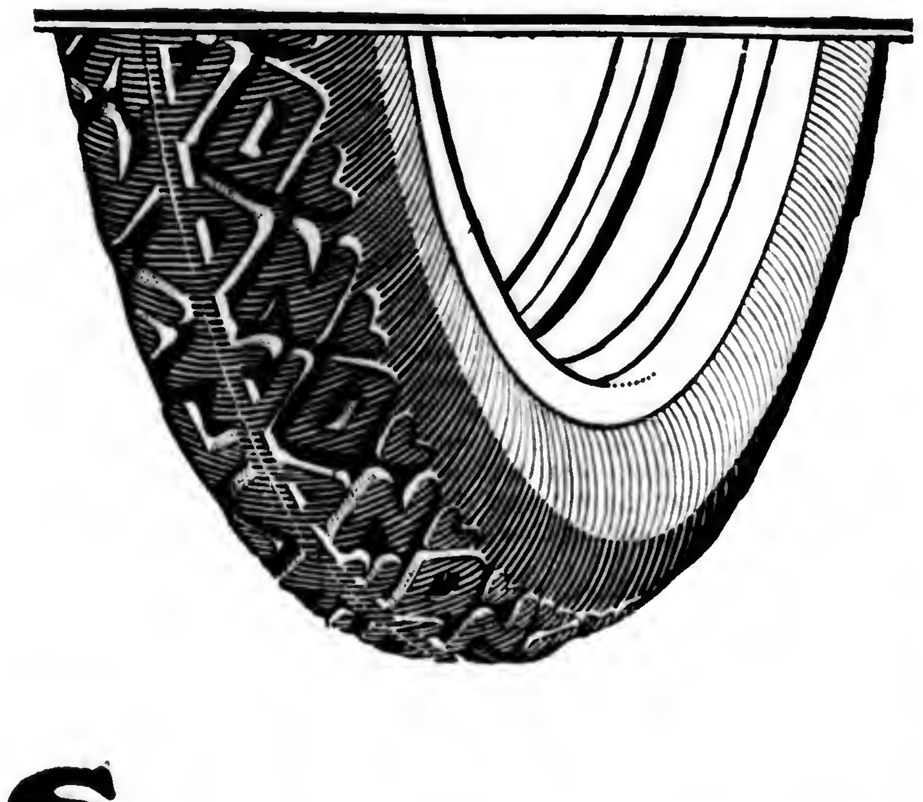


Most Miles *per* Dollar

The Last of the Ripe Tomatoes

Savory Ways for Using Them

Broiled Tomatoes

Slice and broil over a hot fire, then serve with melted butter.

Panned Tomatoes

Ingredients:—Four tomatoes, one tablespoon butter, one tablespoon flour, one cup milk, pepper and salt to suit taste.

Method.—Cut the tomatoes in two crosswise, heat the butter in a frying pan, dip the tomatoes in the flour, put the cut side down in the fry pan, cover and cook over hot fire until brown. Take out, put onto a hot dish. Put the flour in the fry pan, and stir well, then add the milk, and stir until the mixture thickens, season with the salt and pepper, boil a minute, and pour around the tomatoes.

Tomato Boullion

Ingredients. — One quart beef stock, 1 quart tomatoes, 1 heaping teaspoon sugar, 1 teaspoon salt, pepper and some onion juice.

Method.—Put the tomatoes, either canned or fresh, into the skimmed beef stock, and simmer slowly ½ hour, then rub thru a strainer, and return to the fire with the sugar and other ingredients added. Boil up once, then serve.

Tomato and Cucumber Salad

Peel as many small ripe tomatoes as there are persons to be served, scoop out the centers, and chill if possible. Peel and chop coarsely some cucumbers, mix in some French dressing, and fill into the tomatoes, and serve each tomato on a crisp lettuce leaf.

Tomato Aspic

Ingredients.—One pint tomatoes, 1 package of lime gelatin, 1 tablespoon Worcestershire sauce, ½ onion, celery, 1 small cucumber, lettuce and mayonnaise.

Method.—Simmer the tomatoes a few minutes, strain and pour the liquid over the gelatin. Add the Worcestershire sauce, and salt, celery, onion, and cucumber chopped fine. If possible set on ice to chill, then serve on a bed of lettuce leaves dressed with the mayonnaise.

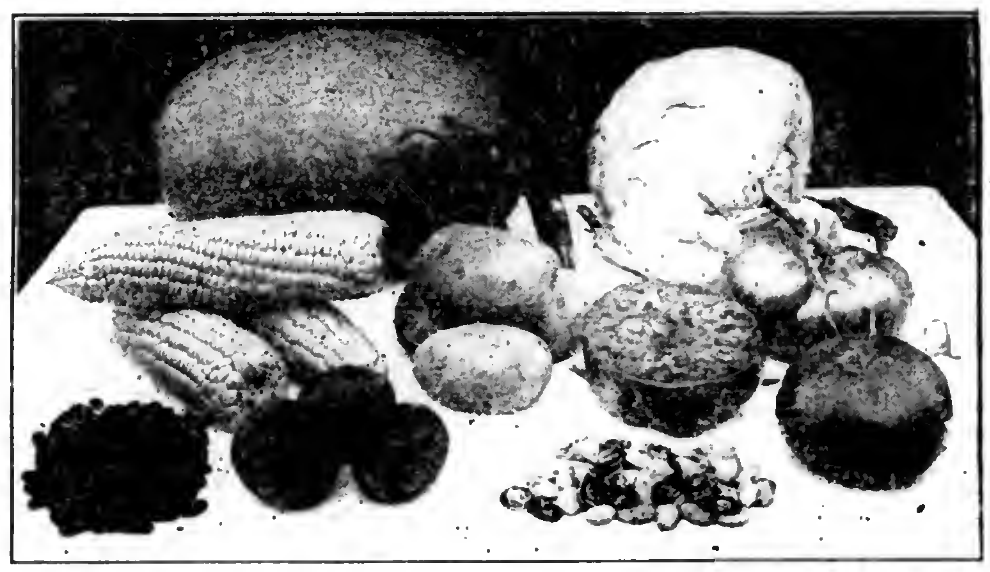
Tomato Salad in Jelly

Ingredients.—Aspic jelly, tomatoes, celery, lettuce and mayonnaise.

To Make the Aspic Jelly.—Per 3 pints of clear seasoned beef stock and 2 ounces gelatin soaked in cold water, and the whites of 2 eggs. Beat well, then add 8 tablespoons lemon juice.

Method For Salad.—Fill the bottom of a salad dish with a little of the above aspic, and set on ice to get firm. When firm, set on top of the aspic jelly a bowl large enough to hold the salad. Pour most of the remainder of the liquid aspic around the bowl until it reaches almost to the top. Fill the bowl with ice, and when the aspic becomes set, remove the ice and pour in warm water for a minute to loosen the bowl so that it can be readily lifted out without spoiling the mold that it has made in the jelly.

Now slice some tomatoes, chop the celery, shred a little lettuce, and mix deftly, then put into the space in the jelly made by the bowl, and cover with more of the liquid aspic. Chill to set the covering. When ready to serve, set the dish in warm water a moment to loosen the contents so that the mass will slip out in good shape, turn onto a bed of lettuce on a platter, and you will have an attractive salad for company. Dress with mayonnaise when you serve the portions.


The Housewife is Fortunate Who Has Plenty of These in Her Garden

Tomato Jelly With Eggs

Soak ½ tablespoon gelatin in cold water, and dissolve over hot water. Dip chilled slices of hard-boiled egg into this gelatin liquid, and press against the sides of a mold set in ice water so that the gelatin will harden at once. Line the side of the mold entirely with such slices, holding each in place under the gelatin sets. Then fill with slices of tomato and crisp lettuce and some tomato jelly made as above described. Chill, slice and dress each portion with mayonnaise or boiled salad dressing.

Tomato Jelly With Cheese

Make some tomato jelly as previously instructed, pour into cups and chill. Run a knife around the inside of the cups so that the jelly will have a roughened surface when removed from the molds. Cut in two crosswise, and put between the halves some of the following cheese mixture:

Cheese Mixture.—Mash fine cup rich cream cheese, add 1 tablespoon sweet cream, ¼ teaspoon salt, ⅛ teaspoon Worcestershire sauce, pepper and paprika to suit taste, and 1 teaspoon gelatin soaked in 1 teaspoon cold water, then dissolved 1 teaspoon boiling water. Chill in a round mold or cup, then slice and put between the tomato jelly halves, serve on lettuce leaves, garnish with parsley.

Fried Tomatoes With Cream Gravy

Cut some tomatoes into thick slices, sprinkle each cut surface with salt, pepper, sugar, and enough fine bread crumbs to dry the cut surface. Have some hot butter or drippings in a frying pan, and brown the tomatoes in it on both sides. Put bits of butter between the tomatoes, and set over a slow fire to finish cooking. Then pour on enough cream to nearly cover, bring to boil and simmer five minutes. Lift the slices out carefully, and thicken the gravy with 2 egg yolks beaten with a little cream. Do not quite boil, and pour on the tomato slices as soon as the gravy thickens.

Stuffed Tomatoes

Cut a small slice from the top of each of 6 firm tomatoes, scoop out the pulp, and turn the tomatoes upside down to drain. Make a stuffing with the pulp, 1 small cup of chopped cold chicken, 1 cup of bread crumbs, 1 egg seasoned with 1 tablespoon salt, 1 teaspoon onion juice, and 2 tablespoons cream. Wipe the tomatoes dry inside, and put in the stuffing, set in a pan, pour 1 cup of beef stock around them, and bake in a moderate oven until the tomatoes are tender, but not falling to pieces. Baste while baking with the stock. Serve at once, placing each tomato on a square of buttered toast.

Tomato Surprise

Scoop out the inside of 5 medium-size tomatoes, and fill with the following mixture: Separate the whites and yolks of 3 eggs, and beat well. Heat ½ cup sweet milk to boiling point, add ¼ teaspoon extract beef, 1 teaspoon cornstarch wet in cold water, add 1 tablespoon butter. Cook until the cornstarch is done, then cool and add to the beaten yolks, then fold in the beaten whites of the eggs. Put into the shells of the tomatoes, sprinkle cracker or bread crumbs over the tops, and bake about 25 minutes.

Good Supper Dish

Fry some onions in butter, then add 1 cup canned or mashed fresh tomatoes, 4 cups cold boiled rice, and 1 cup hot water, in which has been dissolved ½ teaspoon extract of beef, add pepper and salt to suit taste. Mix well and put in a covered baking dish, and bake 45 minutes in a hot oven.

Tomato Rarebit

Put 2 tablespoons butter in a frying pan, then add 2 tablespoons flour and stir well; now add 1 cup cream, ½ cup tomato catsup, 2 cups grated cheese, 2 eggs slightly beaten, and salt and pepper to suit taste. When well mixed served on rounds of hot buttered toast. Garnish with small stuffed olives and parsley to serve.

Tomato Loaf

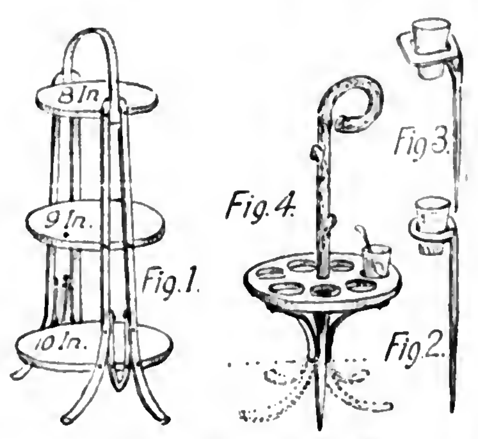
Put 2 lb. round steak and 1 lb. smoked ham thru the meat grinder. Add 2 eggs slightly beaten, 1 cup bread crumbs, ¾ cup milk, ½ cup hot water, 1 bay leaf, 1 teaspoon onion juice, season with salt and a bit of red pepper. Mix well, form into a loaf, put in a baking pan, and pour over it a sauce made by browning some flour in 1 tablespoon butter, then cooking in this ½ can tomatoes and 1 cup hot water. Bake in a moderate oven.—Mrs. Minnie McCabe, Baltimore Co., Md.

DEVICES FOR PICNICS ON THE LAWN

The little stand shown in Fig. 1 is very handy for this purpose. It is light enough to be carried by one or two fingers, but is strong enough and commodious enough to hold three plates of bread and cake, or a larger number of smaller dishes.

This little stand is made by cutting from a ½-inch board three circles of varying sizes; ten, nine and eight inches in diameter are desirable sizes. The side pieces are made of small pliable strips of wood, and are screwed to the edges of the wood circles with small round-headed screws. They are spread at the base as illustrated. The middle piece begins at the lower shelf, and passes up to and on over the upper shelf, forming the handle (the artist did not quite get the idea at this point) and down on the other side as the middle piece. If it is difficult to get a piece that will prove flexible enough to bend, thus for the handle, straight side pieces can be used as far up as the top shelf, then a handle carefully fashioned out of a barrel hoop, somewhat as illustrated herewith.

Fig. 4 is a stand for lemonade glasses. The platform is cut from a ½-inch board. Thru its center fasten a green limb freshly cut so that it can be easily bent for a handle, as illustrated. The lower end is sharpened so that it can be pushed into the ground. The shelf, with the holes cut in it for the glasses, is supported by four curved bits of green wood. Should you prefer to have legs for this stand, cut off the point and fasten on legs, as illustrated by the dotted lines, by allowing the braches to extend on down, and curve out.

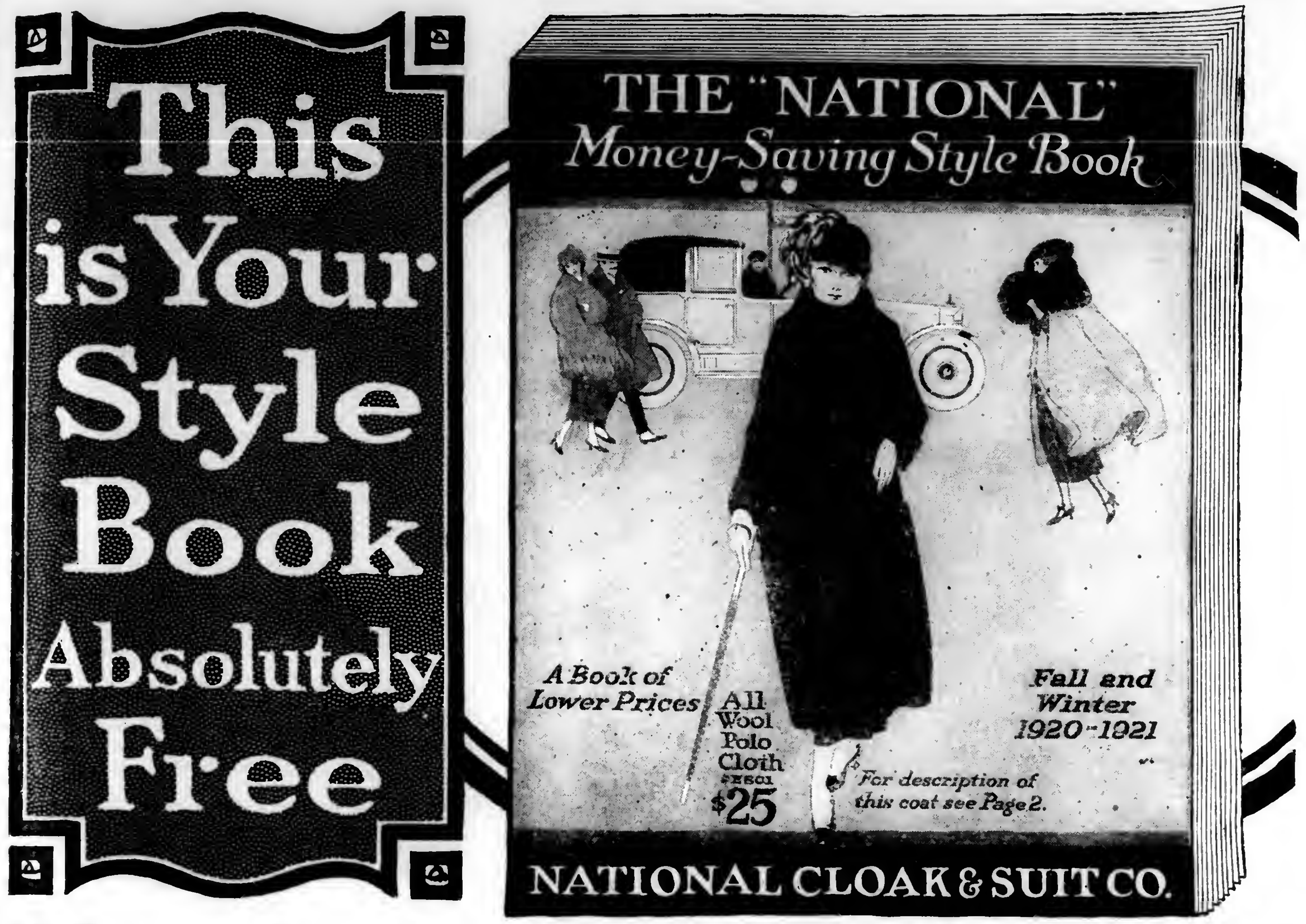


Outdoor Picnic Devices

Figs. 2 and 3 show devices for holding single glasses at the side of each picnicer.

The boys of the family will doubtless enjoy making these devices, which will add much to the convenience of your family when you serve a meal outdoors under the trees, which you should do occasionally while the fine weather lasts.—Sylvanus Van Aken, Ulster Co., N. Y.

Simplicity is the watchword of good dressing for men, women and children and houses, too.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SEPTEMBER POULTRY HINTS

PART II

In planning the winter quarters for hens there should be at least two sections in the laying house. One side can be for the pullets which will lay during the winter. The other side for the hens which are to rest and store up vigor for the laying of hatchable eggs in the spring. Many flocks become devitalized because the hens are forced for eggs all winter and then their spring eggs are used for hatching. The foundation of a successful poultry business rests on the ability to produce strong livable chicks each spring. Prepare the hens from this date to produce the right kind of hatching eggs next spring.

* * *

Pullets are usually considered more profitable layers than hens. But it takes a pullet of the American breeds about twenty months to complete her first year's record. The hen does it in twelve months. The extra eight months are used by the pullet in growing her frame and decorating it with meat and feathers. It follows that a year-old hen of good laying type is ready for another year of profitable laying. She does not have to be grown again. Even if she does not lay as many eggs as in her pullet year she may be a profit winner. Her eggs will be the best for hatching. I believe we must keep more high record old hens until they are about three years old. Hens that have to let marketed at the completion of their first year of laying are not the best. And the returns from poultry meat are not high enough to warrant the poultryman selling any hens that are good layers if more pullets must be produced on high priced feed to replace those hens.

A Centrally Located Feed R oom Saves Many Steps

* * *

Of course that does not mean that the flock should consist of old hens. Pullets must be raised each year to help fill the ranks and keep the flock improving. But cull carefully and give the quality yearling hen a chance to work another year or two if she shows the marks of a high capacity producer. A fine quality yearling hen is often worth more than a medium pullet in the same way that an experienced father is more useful than his kid fresh from college who has not yet been tested.

The value of a hen for meat should be added to the value of the eggs she has laid when figuring the returns from a flock. Fatten the surplus hens if they need it and obtain the best prices for fine quality poultry meat. Receipts from market poultry are quite an item when there are a hundred or more plump birds to be sold. In our experience the dealers discount the lighter breeds but are glad to buy such fowls as the Plymouth Rocks and Leghorns. The Leghorn is an egg proposition and the farmer who breeds them must not be disappointed if the receipts from market poultry seem rather small. And Leghorn hens are rather nervous and do not fatten easily like Plymouth Rocks. We believe it hardly pays to fatten the Mediterranean breeds.

* * *

Ducks and geese are usually vigorous but when the nights become cold or rainy it pays to have a dry well ventilated shed where they can spend the night. It must be clean to help in keeping the birds healthy. Even geese which enjoy paddling all day in slush or icy ponds must have a place for the night where it is high and dry.—R. G. Kirby.

STOP LEAKS TO INCREASE PROFITS

It is the purpose of this short article to point out leaks which are found on any poultry plant and, if possible, to show methods of stopping them.

Feed

One of the largest items of expense for the poultry keeper is feed. Perhaps the best way to reduce this expense is to buy feed in bulk in the fall of the year. Many poultrymen do not have the cash necessary for large purchases but the difficulty may be overcome by several people combining and buying a carload of feed.

A method of buying feed more cheaply is thru cooperative organizations. Many of the poultry keepers of New Jersey have found it profitable to belong to cooperative organizations. The method consists merely of ordering thru the agent for that particular district and paying cash with the order. The only expense to the purchaser is the regular fee of one dollar a year for dues to the organization.

Where feed is bought in large quantities ample provisions for storage are necessary. A dry barn or feed house where there is no possibility of dampness is the best place. There is also the danger of loss from rats. It has been estimated that a full grown family of rats will consume in a year as much feed as twenty-five hens. Bins should be metal lined and holes constantly plugged.

Methods of Feeding

In many poultry houses large amounts of grain from previous feedings may be seen on the floors or in the yards. The one who does the feeding has evidently decided on the amount of grain to be given at each feeding, and feeds this amount regardless of the fact that all is not consumed. Much feed is wasted in this way.

The amount of mash and grain fed can be regulated easily by the one doing the feeding by weighing the mash left in the hopper at the end of the week or month as desired, and then regulating the amount of grain. Another method of regulating the amounts of mash and grain—which is probably easier—is to weigh out the amount of grain fed and make the birds balance up their ration with mash.

Until the birds come into the heavy laying season, they should receive about twice as much grain as mash and equal parts of mash and grain during the heavy laying season, twice as much mash as grain toward the end of the heavy producing season and during the summer to maintain high production. By this method grain the more expensive part of the ration is conserved.

Labor

Good labor is scarce, in fact, many losses are due to inferior labor. The laborer has no interest in the business and puts in time merely to get money. The result is that birds do not receive the proper care, feed is wasted, work is done in a slipshod way, and general inefficiency is shown everywhere.

Attention to details is demanded. It is the duty, therefore, of the owner to interest the attendant in the work, giving him something to work for besides his regular wages. If the helper knows that he is going to get more out of the business if the owner makes more, and that this depends on him, he will exercise more care.

Handling of Products

The production of fertile eggs and dirty eggs helps to cut the profits as do eggs that are held before shipment. Infrequent collections cause eggs to rot more quickly. A few of the main points in the production of eggs for market are: Produce infertile eggs, produce clean eggs by keeping the nests clean, collect eggs frequently, don't hold eggs long, keep eggs at a low temperature about 40 degrees, grade eggs before shipment, carefully renail crates before packing, pack crates so as to have an excelsior cushion at the top—don't nail in the middle, ship by express as early in the day as possible and ship before Thursday or Friday so the eggs will not have to be on the road over the week end.

The loss due to breakage is tremendous and is one of the biggest leaks in the poultryman's profits. Great care should be taken to avoid this loss by using only strong crates which have been renailed and made perfertly safe for transit.—R. H. H.

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"DOCKAGE SYSTEM" SUGGESTED FOR PENNSYLVANIA WHEAT GROWERS

Growers of wheat who sell their products to local buyers or millers often are surprised by the wide range which exists between the prices they receive and the prices quoted on the exchanges in the seaboard markets.

The prices in the large markets are suoted on inspected grain, graded according to the U. S. standards, while the farmers wheat is bought "as is" by local buyers or millers to meet their requirements. The local buyers and millers, not having the facilities for grading nor for handling samples of grain to determine the amount of dockage present in the wheat, are compelled to place their buying figures low enough to guard themselves against losses due to possible bad judgment or incorrect estimating of the grade of the wheat.

The installation of the "Dockage System" suggested by the Bureau of Markets, Pennsylvania Department of Agriculture and the U. S. Bureau of Markets in country markets by the growers, buyers and millers would insure to all parties concerned a fair basis of comparison at least for the wheat of the community.

Dockage is the foreign matter in the wheat which may be easily separated by appropriate selves and does not affect the grade of the dockage free wheat. Any foreign material not separable by the dockage method is a very important factor in determining the grade of the wheat. The percentage of this material in the grades is small indeed, and is not determinable unless the dockage has been removed.

A study of the grades would be most profitable to any one interested in wheat. The moisture content, determinable only by laboratory methods, varies with the grades from 13.5 and 14 percent for No. 1, to 15.5 and 16 percent for No. 5. The test weights per bushel which is the method commonly used in buying wheat, varies from 49 lbs. on some classes in grade No. 5 wheat to 60 lbs. in grade No. 1.

The importance of the dockage system is revealed in the fact that the standards presented can only apply to dockage free wheat. It would not be a fair practice to apply the grades otherwise.

A fuller discussion of the dockage system is found in recent bulletins of the U. S. Department of Agriculture.

The Bureau of Markets of the Pennsylvania Department of Agriculture is desirous of seeing the local grain trading conducted in the fairest possible way and will lend all the assistance possible to those interested in using the government standard grades. Daily market reports giving the prices paid in the principal large markets for graded grain are published in many newspapers of the state.

Address inquiries to the Bureau of Markets, Pennsylvania Department of Agriculture.

Whatever is worth doing on the farm is worth doing well.

Copious rains during August have been a great help to the corn and a special crop is promised.

Fifty-six pounds of fresh burned stone lime accomplishes the same purpose as seventy-four pounds of hydrated lime and one hundred pounds of pulverized lime stone.

WORKING TOGETHER

A great deal is said in these days about cutting small farm expenditures—economizing at the spiggot, it is often called. This has been done by many. One neighborhood has two farmers who have been working together ever since last winter. These men got out logs together for lumber which brought them a comfortable sum of money. Working alone they could not have done this at all. These same men did their work in maple sugar making together. They changed work plowing, harrowing and putting in crops. They did their haying in large measure in the same way. They cut their grain together, and recently have purchased a grain separator to thresh with. In these ways they have saved I do not know how much money and been able to carry on farming operations to an extent they could not otherwise have done.

One young farmer has bought a blower for filling his own silo. He plans that this will enable him to economize in hired help about one half. With the assistance of a few men he intends to cut his own corn. The relief to the woman of the house is not the least of the saving that will be effected by this plan.

In an adjoining neighborhood two young farmers are working together in practically the same way. They do their threshing and silo filling together and have been able to earn some money doing this kind of work for neighbors who have not the needed machinery.

It seems to be surprising to some that the farmers of this country have been able this season to grow such crops as they have. When the truth is known it will be found that the free purchase of machinery and cooperate use of the same has made it possible for men to do so much more than it was thought they could do earlier in the year.—E. L. V., Broome Co., N. Y.

A CONCRETE EXAMPLE

(Continued from Page 9)

there were over 200 purebred dairy animals exhibited, and all were from tested, accredited herds. Even a casual observer could not help but be impressed with the beauty and value of the animals. The success of this asociation is due to the intelligent co-operation of the people of Grove City and vicinity, and could be repeated in almost every farming community in the land if the people would but try. It is an example also of what country banks could do in many other localities for agricultural development.

Since 1916, the Grove City Bank has assisted in the purchase and distribution, among farmer patrons of the creamery, of 12 carloads of purebred tuberculin-tested dairy cattle. In the immediate vicinity of Grove City there are now more than 250 farmers owning one or more purebred dairy animals. The bank has financed the somewhat extensive purchase of the best available bulls. It provided prizes for the local stock show; aided the boys' and girls' club work; given support to an accredited herd association; and encouraged thrift clubs among school children. In addition the bank publishes a dairy newspaper sent free to every farmer in the community.

Community action is necessary in the fight against the deadly housefly. An organized campaign can make a fly-less town.

This Book Free

Every farmer and his wife should read our big illustrated hand-book and learn how to scientifically treat seeds with the best and most economical disinfectant—

FORMALDEHYDE
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Positively rids seed grain of smuts, potatoes of scab and black-leg; destroys disease germs in drains, stables, kennels, chicken houses, etc., kills flies. Endorsed by the U. S. Dep't of Agriculture for treating all seed grain. One pint bottle of *Formaldehyde* from our laboratory will treat 40 bushels of seed. Write for Book—just issued—free.

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by drying this summer's crop. U. S. Cook-Stove Drier dries all kinds of fruit, berries and vegetables. Indorsed by the Agricultural Dept. of the U. S. Government, which is using them for training in home economics and conservation of Foods. Guaranteed to give satisfaction. Price $8.00. Write for Circulars and further information. Agents Wanted.

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PUBLIC SALE OF FARMS

SEPTEMBER 18, 1920. For Emanuel Schurr Estate, 109 acre farm with great set buildings. A No. 1 soil; Main Line R. R. and electric cars by farm. Great view of Schuylkill River and valley; near large cities.

SEPTEMBER 25, 1920. For John T. Keyser, 86 acre farm, fine house, new barn, within sight of electric cars and Wm. Penn Highway; good soil. You should write for illustrated leaflet and arrange to attend these sales thru

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New 12 x 30 two-piece Oregon clear fir Silo (with skeleton roof) made by International Silo Company. Never been put up. Can ship at once. $280.00 will take it.

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For sale, the big type Flemish Giants, also high class New Zealand Reds and R. R. Belgian Hares; Guinea Pigs, Ferrets; Pigeons; White Mice and Rats; Thoroughbred dogs, puppies a specialty, Blooded hogs. Write for prices. 10c for booklet.

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For August and Fall planting. Runner and pot-grown plants that will bear fruit next summer. Also Raspberry, Blackberry, Dewberry, Gooseberry, Currant, Grape, Asparagus, Rhubarb plants; Roses, azaleas; Shrubs for fall planting. Catalog free.

HARRY H. SQUIRES, GOOD GROUND, N. Y.

Whispering Smith

by Frank H. Spearman

(Continued from Last Week.)

CHAPTER XXIX

Williams Cache

I've got too many cows, too much money. I'm afraid somebody will shoot me if I go to sleep, or poison me if I take a drink. Whispering Smith, I'd like to give you a half-interest in my business. That's on the square. You're a young man, and handy; it wouldn't cost you a cent, and you can have half of the whole shooting-match if you'll cross Deep Creek and help me run the gang." Such was Rebstock free from anxiety and in a confidential moment. Under pressure he was, like all men, different.

Whispering Smith had acquaintance even in the Cache, and after a little careful reconnoitring he found a crippled-up thief, driving a milch cow down the Cache, who was willing to take a message to the boss.

Whispering Smith gave his instructions explicitly, facing the messenger, as the two sat in their saddle, with an importunate eye. "Say to Rebstock exactly these words," he insisted. "This is from Whispering Smith: I want Du Sang. He killed a friend of mine last night at Mission Springs. I happened to be near there and know he rode in last night. He can't get out; the Canadian is plugged. I won't stand for the killing, and it is Du Sang or a clean-up in the Cache all around, and then I'll get Su Sang anyway. Regards."

Riding circumspectly in and about the entrance to the Cache, the party waited an hour for an answer. When the answer came, it was unsatisfactory. Rebstock declined to appear upon so trivial a matter, and Whispering Smith refused to specify a further grievance. More parley and stronger messages were necessary to stir the Deep Creek monarch, but at last he sent word asking Whispering Smith to come to his cabin accompanied only by Kennedy.

The two railroad men rode up the canyon together. "And now I will show you a lean and hungry thief grown monstrous and miserly, Farrell," said Whispering Smith.

At the head of a short pocket between two sheer granite walls they saw Rebstock's weather-beaten cabin, and he stood in front of it smoking. He looked moodily at his visitors out of eyes buried between rolls of fat. Whispering Smith was a little harsh as the two shook hands, but he dismounted and followed Rebstock into the house.

"What are you so high and mighty about?" he demanded, throwing his hat on the table near which Rebstock had seated himself. "Why don't you come out when I send a man to you, or send word what you will do? What have you got to kick about. Haven't you been treated right?"

Being in no position to complain, but shrewdly aware that much unpleasantness was in the wind. Rebstock beat about the bush. He had had rheumatism; he couldn't ride; he had been in bed three weeks and hadn't seen Du Sang for three months. "You ain't chasing up here after Du Sang because he killed a man at Mission Springs. I know better than that. That ain't the first man he's killed, and it ain't a' goin' to be the last.' '

Whispering Smith lifted his finger and for the first time smiled. "Now there you err. Rebstock—it is 'a goin' to be' the last. So you think I'm after you, do you? Well, if I were, what are you going to do about it? Rebstock, do you think, if I wanted you, I would send a message for you to come out and meet me? Not on your life! When I want you I'll come to your shack and drag you out by the hair of the head. Sit down!" roared Whispering Smith.

Rebstock, who weighed at least two hundred and seventy-five pounds, had lifted himself up to glare and swear freely. Now he dropped angrily back into his chair. "Well, who do you want?" he bellowed in kind.

A smile softened the asperity of the railroad man's face. "That's a fair question and I give you a straight answer. I'm not bluffing; I want Du Sang."

Rebstock squirmed. He swore with shortened breath that he knew nothing about Du Sang; that Du Sang had stolen his cattle; that hanging was too good for him; that he would join any posse in searching for him; and that he had not seen him for three months.

"Likely enough,' assented Whispering Smith, "but this is wasting time. He rode in here last night after killing old Dan Baggs. Your estimable nephew Barney is with him, and Karg is with him, and I want them; but, in especial and particular, I want Du Sang."

Rebstock denied, protested, wheezed, and stormed, but Whispering Smith was immovable. He would not stir from the Cache upon any promises. Rebstock offered to surrender any one else in the Cache—hinted strongly at two different men for whom handsome rewards were out; but every compromise suggested was met with the same good-natured words: "I want Du Sang."

At last the smile changed on Whispering Smith's face. It lighted his eyes still, but with a different expression. "See here, Rebstock, you and I have always got along, haven't we? I've no desire to crowd any man to the wall that is a man. Now I am going to tell you the simple truth. Du Sang has got you scared to death. That man is a faker, Rebstock. Because he kills men right and left without any provocation, you think he is dangerous. He isn't; there are a dozen men in the Cache just as good with a gun as Du Sang is. Don't shake your head. I know what I'm talking about. He is a jay with a gun, and you may tell him I said so; do you hear? Tell him to come out if he wants me to demonstrate it. He has got everybody, including you, scared to death. Now, I say, don't be silly. I want Du Sang."

Rebstock rose to his feet solemnly and pointed his finger at Whispering Smith. "Whispering Smith, you know me—"

"I know you for a fat rascal."

"That's all right. You know me, and, just as you say, we always get along because we both got sense."

"You're hiding yours today, Rebstock."

"Nô matter; I'll tell you what I'll do. I'll give you all the horseflesh you can kill and all the men you can hire to go after him, and I'll bury your dead myself. You think he can't shoot? I give you a tip on the square." Whispering Smith snorted. "He'll shoot the four buttons off your coat in four shots." Smith kicked Rebstock's dog contemptuously. "And do it while you are falling down. I've seen him do it," persisted Rebstock, moist with perspiration. "I'm not looking for a chance to go against a sure think; I wash my hands of the job."

Whispering Smith rose. "It was no trick to see he had you scared to death. You are losing your wits, old man. The albino is a faker, and I tell you I am going to run him out of the country." Whispering Smith reached for his hat. "Our treaty ends right here. You promised to harbor no man in your sink that ever went against our road. You know as well as I do that this man, with four others, held up our train night before last at Tower W, shot our engineman to death for mere delight, killed a messenger, took sfxty-five thousand dollars out of the through safe, and made his good get-away. Now, don't lie; you know every word of it, and you thought you could pull it out of me by a bluff. I track him to your door. He is inside the Cache this minute. You know every curve and canyon and pocket and washout in it, and every cut-throat and jail-bird in it, and they pay you blood-money and hush-money every month; and when I ask you not to give up a dozen men the company is entitled to, but merely to send this pink-eyed lobster out with his guns to talk with me, you wash your hands of the job, do you? Now listen. If you don't send Du Sang into the open before noon tomorrow, I'll run every living steer and every living man out of Williams Cache before I cross the Crawling Stone again, so help me God! And I'll send for cowboys within thirty minutes to begin the job. I'll scrape your Deep Creek canyons till the rattlesnakes squeal. I'll make Williams Cache so wild that a timber-wolf can't follow his own trail thru it. You'll break with me, will you Rebstock? Then wind up your bank account; before I finish with you I'll put you in stripes and feed buzzards off your table."

Rebstock's face was apoplectic. He choked with a torrent of oaths. Whispering Smith, paying no attention, walked out to where Kennedy was waiting. He swung into the saddle, ignoring Rebstock's abjurations, and with Kennedy rode away.

"It is hard to do anything with a man that is scared to death," said Smith to his companion. "Then, too, Rebstock's nephew is probably in this. In any case, when Du Sang has got Rebstock scared, he is a dangerous man to be abroad. We have got to smoke him out, Farrell. Lance Dunning insisted the other day he wanted to do me a favor. I'll see if he'll lend me Stormy Gorman and some of his cowpunchers for a round-up. We've got to smoke Du Sang out. A round-up is the thing. But, by Heaven, if that round-up is actually pulled off it will be a classic when you and I are gone."

Thirty minutes afterward, messengers had taken the Frenchman trail for Lance Dunning's cowboys.

CHAPTER XXX

The Fight in the Cache

A clear night and a good moon made a long ride possible, and the Crawling Stone contingent, headed by Stormy Gorman, began coming into the railroad camp by three o'clock the next morning. With them rode the two Youngs, who had lost the trail they followed across Goose River and joined the cowboys on the road to the north.

The party divided under Kennedy and Smith, who rode thru the door into the Cache just before daybreak.

"I don't know what I am steering you against this morning, Farrell," said Whispering Smith. "Certainly I should hate to run you into Du Sang, but we can't tell where we shall strike him. If we have laid out the work right I ought to see him as soon as anybody does. Accidents do happen, but remember he will never be any more dangerous than he is at the first moment. Get him to talk. He gets nervous if he can't shoot right away. When you pull, get a bullet into his stomach at the start, if you possibly can, to spoil his aim. We mustn't make the mistake of underestimating him. Rebstock is right; he is a fright with a revolver, and Sinclair and Seagrue are the only men in the mountains that can handle a rifle with him. Now we split here; and good luck!"

"Don't you want to take Brill Young with you?"

"You take both the Youngs, Farrell. We shall be among rocks, and if he tries to rush us there is cover."

Stormy Gorman with four Crawling Stone cowboys followed Whispering Smith. Every rider on the range had a grievance against Williams Cache, and any of them would have been glad to undertake reprisals against the rustlers under the wing of Whispering Smith.

Just how in the mountains—without telegraph, newspapers, and all ordinary means of publicity—news travels so fast may not certainly be said. The scattered lines of telephone wires help, but news outstrips the wires. Moreover, there are no telephones in the Mission Mountains. But on the morning that the round-up party rode into the Cache it was known in the streets of Medicine Bend that the Tower W men had been tracked into the north country; that some, if not all, of them were in Williams Cache; that an ultimatum had been given, and that Whispering Smith and Kennedy had already hidden in with their men to make it good.

Whispering Smith, with the cowboys, took the rough country to the left, and Kennedy and his party took the south prong of the Cache Creek. The instructions were to make a clean sweep as the line advanced. Behind the centre rode three men to take stock driven in from the wings. Word that was brief but reasonable had been sent everywhere ahead. Every man, it was promised, that could prove property should have a chance to do so at the Door that day and the next; but any brands that showed stolen cattle, or that had been skinned or tampered with in any way, were to be turned over to the Stock Association for the benefit of owners.

(Continued Next Week.)

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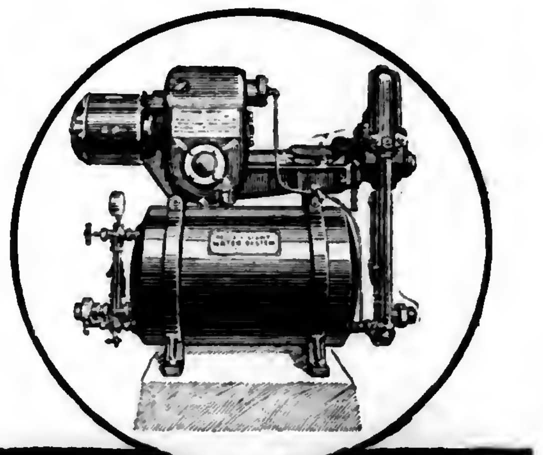

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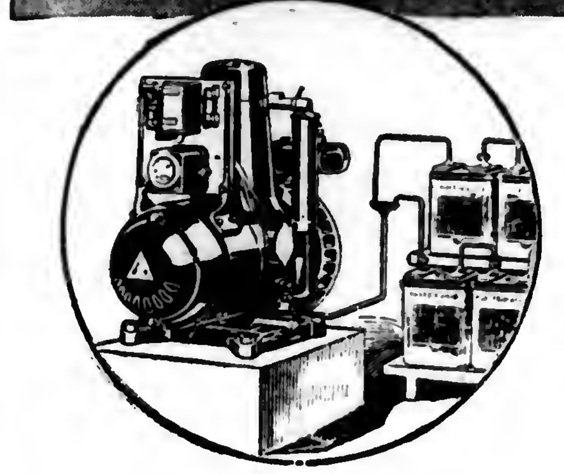

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Markets

PHILADELPHIA PRODUCE

—Sept. 13, 1920.

The market on potatoes is ruling steady to firm with prices showing but little change from day to day. Most of the supplies are from New Jersey which are selling at $2.60@2.75 per 150-pound sack for the Giants, and $3@3.50 per sack for the round stock. Some Pennsylvania potatoes have been here and are bringing from $1.75@2 per cwt. The potatoes hauled in by the nearby farmers are selling generally at 75@90c per ⅝-basket for No. 1s and 35@50c per basket for No. 2s.

Sweet potatoes are now in quite liberal supply and prices have been declining a little every day for the past several days, until at the present writing most New Jersey sweet potatoes are selling at 90c@$1.10 per ⅝-basket for primes, with medium sized stock at 60@75c, and No. 2 sweet potatoes at 35@50c per basket. Eastern Shore sweet potatoes sold here this morning at $4@4.25 per barrel for No. 1s, with mediums at $2 and culls and No. 2s at $1@1.50 per barrel.

Vegetables.—The supplies of both green and wax beans are getting lighter every day and the market is now ruling firm at 75c@$1.50 per ⅝-basket for both kinds, with few however real fancy beans now coming to the market. Beets seem to be quite scarce at the present writing and are selling promptly when here at 3@4c per bunch. Cabbage is not very active and the low price of 15@30c per ⅝-basket is prevailing on the nearby grown stock. Some New York state cabbage has been here but it has been selling very slowly at $15@18 per ton. Carrots are fairly plentiful and selling at $1.50 per 100-lb. sack for New York state carrots, while the nearbys bring mostly at 40@65c per ⅝-basket, with an occasional lot of extra fancy up to 75c. Cauliflower from New York state is meeting a fair demand at $1@2.25 per crate. Celery has remained practically unchanged ever since our last report at 20@75c per bunch, as to size, while the celery hearts are selling at 5@7c per bch.

Corn is meeting a fair demand when fancy, but there is much poor corn about and prices consequently take the wide range of 30@80c per ⅝ basket for New Jersey, and 75c@$2 per 100 ears for Pennsylvania corn. Cucumbers are again quite plentiful, the most of the supplies being from New York state and sales are made all the way from 50c@$1.50 per bushel, with the dill pickles at $1.25@2 per bushel and the small count pickles at $2.50@5.50 per bushel. Egg plants are rather dull at 20@30c per ⅝-basket. Lettuce was very plentiful here today there being 10 cars or more of New York state lettuce here, most of which was of poor to ordinary quality and prices only ran from 25c@$1.25 per box of two dozen heads. Lima beans are rather scarce and when fancy good prices are prevailing, but there are some poor lima beans which are selling at low prices and values therefore take the wide range of $1@2.25 per ⅝-basket, and $2@3 per bushel hamper. Onions are a little weaker at 60@75c per ⅝-basket for the nearby yellows while the white onions sell all the way from $1@2.50 per bushel hamper as to size and condition, the very small pickling and stewing white onions bringing top prices. A car of New York state yellow onions was being sold here this morning at $2 per 100-pound sacks, while a car of fancy large onions from the west were bringing $2.75 per 100 pound sack. Parsley is a little lower at $1@1.25 per hamper. Peppers are about steady at 35@50c per ⅝-basket for green, 65@90c per ⅝ basket for red peppers, $1@1.25 per ⅝-basket for red tomato peppers and 65@90c per basket for the hot, finger peppers. Squash is in light demand at 20@30c per ⅝-basket. The market has been abundantly supplied with tomatoes and very low prices have been prevailing for several days. At this writing good tomatoes can be bought at 25@40c per ⅝-basket with poor to fair at 10@20c per ⅝-basket. The yellow egg tomatoes are in fair request at 50@75c per basket. Okra is about steady at 75c@$1.25 per basket.

Fruits.—As the season advances and the later varieties come along the market appears to be doing better. Today, New Jersey apples sold at 75c@$1.40 per ⅝-basket for No. 1s, with No. 2s at 35@75c and culls at 20@35c. Barreled apples are selling from $3.25@7 per barrel, while apples in bushel basket sold at $1@1.75 per bushel. Crab-apples are in moderate supply and bringing $2.50@2.75 per bushel, and $1.50@2 per ⅝-basket for the nearby New Jerseys. Pears are arriving quite freely but meeting an active demand at $2@3 per bushel for No. 1 Bartletts and $1.25@1.75 per No. 2 Bartletts. The Seckel Pears are quotable at $2@3 per bushel. Nearby New Jersey grown Bartlett pears sell at $1@1.75 per ⅝-baskets and Seckels sell at $1.25@2 per basket. The nearby peaches continue to supply the market with the best Filbertas selling at $1@1.50 per ⅝-basket and the white peaches at 75c@$1.25 per ⅝ basket. A car of peaches from Maryland sold here this morning at $1.50 per bushel, but they were not fancy. Plums are meeting a good demand at $1.25@2.50 per bushel as to quality and variety. Cantaloupes are still in the market with the nearby New Jerseys selling at 50c@$1.50 per ⅝-basket and the western at 75c@$1.75 per flat crate. The Honey Dew Melons are selling at $1.25@1.75 per crate.

Poultry.—Live poultry is meeting a firm and active demand and the market is ruling firm with all values being well sustained. Fancy heavy fowls are now selling at 38@42c per pound while the lighter and medium sized and white leghorn fowls bring from 32@36c per pound. Old roosters are meeting a quick outlet at 24@25c. Spring chickens weighing 2½ to 3 pounds each sell quickly at 38@42c per pound while broiling chickens sell promptly at 37@38c for best sizes, with smaller at 33@36c per pound. Ducks show no change at 30c per pound on old with spring ducks selling at 30@33c per pound.

Eggs.—The market is ruling very firm on eggs and prices are higher than those prevailing a week ago. Strictly fine eggs are very scarce and such sell promptly at a premium over quotations which are as follows: Pennsylvania and other nearby current receipts 59c, Pennsylvania and other nearby firsts 60@62c, ordinary to fair grades 54c@57c, and for extra fancy selected and candled 71@72c per dozen is being obtained. Western firsts are quotable at 58@59c per dozen western extra firsts 60@62c, and western seconds, 48@54c per dozen.

YORK PRODUCE MARKETS

—Sept. 13, 1920.

There is no let-up in the downward trend of the markets, except in the case of those products that are near the end of their season, such as tomatoes, peaches, and also eggs are becoming less plentiful. Very few potatoes are sold on the markets, they are being peddled over the streets at almost any price from $1 to $1.35 per bu. Apples continue low and slow in movement, it is just the season when the drop of the fall apples of unsprayed trees is the greatest, and this cull product largely regulates the price of the higher grade fruit.

Eggs.—60@65c per dozen.

Butter.—Country, 60@65c lb.; separator, 65@75c. Milk, 14c quart.

Poultry.—Hens, 30c lb.; springers, 32c lb.; dressed, $1@2 each.

Vegetables.—Potatoes, 15@25c ½ pk.; $1@1.50 per bu.; lettuce, 5c hd.; beets, 5c bch.; cabbage, 3@10c hd.; radishes, 6c bch.; onions, 10c bx.; 20@25c ½ pk.; corn, 20@36c per doz.; peas, 25@30c ¼ pk.; beans, 12@15c ½ pk.; lima beans, 25c qt.; peppers, 15@20c dozen; egg-plants, 5@10c each; squash, 5c each; cucumbers, 75c@$1 per 100; ham, sliced, 45@80c lb.; whole, 40@47c lb.

Fruit.—Apples, 10@40c ½ pk.; 5@15c box; pears, 10c box; 15c ½ pk.; plums, 12@15c qt.; peaches, 15c box; 20@30c ¼ pk.; $1.75@2.50 per basket; tomatoes, 10@30c ¼ peck.

Retail Grain Market.—Wheat $3; corn, $2; oats, $1; rye, $1.75; bran, $3 per cwt.; middlings, $4 per cwt.

Wholesale Grain Market.—Wheat, $2.45; corn, $1.50; oats, 80c; rye, $1.45; bran, $60 per ton; middlings, $70 per ton.

NEW YORK PRODUCE

—Sept. 11, 1920.

Butter.—Easy; receipts, 7,273. Creamery, higher than extras, 59@59½c; creamery, extras 92 score), 58½c; creamery, firsts, (88 to 91 score), 52@57½c; packing stock, current make, No. 1, 40½@41c.

Eggs.—Steady; receipts, 15,944; fresh gathered, extra, firsts, 59@61c; fresh gathered, firsts, 55@57c; State, Pennsylvania and nearby, Western hennery whites, firsts to extras, 68@80c; State, Pennsylvania and nearby Western hennery browns, extras, 67@70c; State, Pennsylvania and nearby gathered browns and mixed colors, first to extras, 55@64c.

Cheese.—Firm: receipts, 1,500. State, whole milk, flats, current make, white and colored specials, 29@29¼c; do., average run, 27@28c; state, whole milk, twins, current make, specials, 28@28¼c; do. ,average run, 27@27½c.

Live Poultry.—Irregular; broilers, by freight, 38c; broilers, by express, 37@41c; fowls, 39@41c; old roosters, 22c; turkeys, 40c. Dressed poultry, steady roasting chickens, 46@50c.

Vegetables.—Potatoes, bbl., L. I., bbl., $3.50@3.75; Jersey, 150-lb., $2.40@3.50; Sweets, bskt., 1's, $1.25@2; Beans, bskt., Wax, 50c@$2.50; Green, 50@$2.25; Beets, bbl., $2@2.50; Carrots, nby, 100, $1@2; Corn, Jy, 100, $1@3.50; Jy, bsk. $1@1.50; Celery, crt., State, bch. 15@65c; Jy., bch., 15@65c; Cucumbers, State, bskt., $1@2.50; Jy, bskt., 50c@$1.50; Cabbages, L. I., bbl., 50c@$1; Jy., bbl., 50c@$1; Cauliflowers, nby bbl., State, crt. 75c@$2.50 Eggplants, Jr, box, 40@65c; Lima beans, Jy, bskt., $1.25@2; Lettuce, State, crt., $1@1.75; Onions, state, Wh. bskt., $1@2; Yel., bskt., 75c@$1.25; Jersey Wh., bskt., $1@1.50; Yel., bskt., $1@1.25; Peppers, Green—bbl., $1.75@2.25; Squash, Wh., bbl., $1@2; Yel., bbl., $1@2; Turnips White, bbl., $1.50@2.50; Tomatoes, Up-Jersey box, 25c@$1.25; South Jersey, Acme, 50@85c; Stone, 50@85c; Grant, 20@75c.

Fresh Fruit.—Apples—Baskets, 50@$2; barrels, $3@7; boxes $3.75@4.25. Pears, boxes, $2.75@3.25. Peaches, crate, Jy. Elbta, $2@2.75; Plums, state, bskt., 30@75c;

PITTSBURGH PRODUCE

—Sept. 13, 1920.

Butter and Cheese.—Prints, 63@63½c; Tubs, 61½@63c; Cooking, 52@53c; Ohio, 58@59c; Cheese—New York full cream, 31@32c; Roquefort, $1@1.20; Wis. Swiss, 49@50c; Phila. cream, doz., $1; Longhorns, 31@32c.

Eggs.—Fresh, select, 60@62c; Specials, at mark, 55@56c. Current receipts, 52@53c.

Produce.—Potatoes, J'y Cob., 150 lb. sk., $4.00; Sweet potatoes, hpr., $2.50@2.75; Beans, wax and green, hpr., $1.75@2; do., lima, hpr., $2@2.25. Onions, sack $3.25@3.50. Cabbage h. g. bu., 65@75c. Lettuce, h. g. box, 75c@$1; Turnips, bu., $2.25@2.50; Green corn, h. g., bu., $1.75@2.25; Tomatoes, bsk., 50@60c; Cucumbers, do., h. g., chip, 50@90c. Carrots, new dozen, 35@40c; Celery, bunch, 25@50c. Peppers, hpr., $1.50@2.

Fruits.—Apples, bu., $1@2; do., bbl., $3.50@5. Pears, Bartlett, Wash. box, $3.50@4; do., N. Y., bu., $2.50@3; Watermelons, each 50@90c. Peaches, crt., $2@3; do., bu., $1@3.

PHILADELPHIA LIVESTOCK

—Sept. 11, 1920.

Receipts of the week ending Sept. 11th, 1920, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Totals for week	2,383	8,709	7,710
Previous week	2,081	12,323	9,255

Calves.—Receipts of calves were 2,432 head against 2,052 head previous week.

Beef Cattle.—In better request, due in part to the return to the city of many vacationists, and market developed a better tone, tho prices quotably unchanged. Quotations: Steers, good to choice, $15@16.50; fair to good, $13@15; common to fair, $11.50@13; cows, good to choice, 8½@10c; do., fair to good, 7@8½c; bulls, 7@9½c; calves, extra to choice, $19@20; fair to good, $17.50@18.50; common, $12@13; Tennessee, $17@18; other southerns, $8@13.

Sheep and Lambs.—Demand improving; and lambs of fine quality firmer. Quotations: Sheared sheep, wethers, extra, $8@8.50; do., good to choice, $7@8; medium, $5@6; do., common, $2@3; ewes, heavy, fat, $5.50@6; lambs spring, choice, $14@14.50; medium, $11@12.50; common, $8.50@10.

Hogs.—Firm and higher under stronger western advices and lighter receipts. We quote: Best western, $19@19.50; good, nearby, $17.50@18.

City Dressed Stock.—Generally firm under a more active demand and light offerings and hogs and calves higher. We quote: Steers, 20@28c; heifers, 18@26c; cows, choice, 18@21c; cows, light, 12@16c; calves, city dressed, choice, 30@32c; calves, country dressed, 27@29c; lambs, spring, choice, 28@30c; sheep, 10@20c; hogs 25@25½c.

LIVESTOCK MARKETS

—Sept. 11, 1920.

PITTSBURGH

Hogs.—Receipts, 1,200; higher; heavies, $16.50@16.75; heavy yorkers, $17.90@18; light yorkers, $17@17.50; pigs, $16.50@16.75.

Sheep and Lambs.—Receipts, 500; steady; top sheep, $8.50; top lambs, $13.50.

Calves.—Receipts, 50; steady; top, $19.

CHICAGO.

Cattle.—Receipts, 1,100; compared with week ago, good and choice steers and yearlings 25c to 50c higher; all weight topping at $18; common and medium grades uneven, but average about steady; spots 50c higher; canners and cutters steady to strong; bulls strong to 25c higher; choice veal calves held uniformly steady to trade; medium and heavy calves, 50c to $1 lower; range cattle strong to 25c higher; stockers, 25c higher; good feeders 25c to 50c higher.

Hogs.—Receipts, 2,400; mostly 10c to 15c higher than yesterday's average, top, $16.85; bulk, light and butchers, $15.85@16.75; bulk, packing sows, $14.65@15; pigs strong.

Sheep.—Receipts, 1,500; compared with week ago, fat and feeding lambs and yearlings 25c to 50c higher; fat ewes steady to weaker; culls and feeding ewes strong to higher.

EAST BUFFALO, N. Y.

Cattle.—Receipts, 300; slow.

Calves.—Receipts, 200; $1 lower, $6@19.

Hogs.—Receipts, 1,120; 40c to 75c higher; heavy, $17@17.50; mixed, $17.75@18.25; yorkers, $18@18.25; light yorkers, $17.50@18; pigs, $17.25; roughs, $13.50@13.75; stags, $8@10.50.

Sheep and Lambs.—Receipts, 1,200; steady; lambs, $6@14.50; few $15; yearlings, $6@9; wethers, $7.50@8; ewes, $3@7; mixed sheep, $7@7.50.

NEW YORK HAY AND GRAIN

—Sept. 13, 1920.

Feed.—The market for mill feed was very inactive and the undertone was easy. Mill offers were not of large proportions but the demand was so small that it required but little selling pressure to give the market a heavy appearance.

Quotations: City feed bran, $50; middling, $58, in 100-pound sacks; red dog $82, nominal, in 100-pound sacks; Western spring bran, $50; standard middlings, $55; flour middlings, $68; red dog, $80.75, all in 100-pound sacks, 30-day shipment. Oat feed, $35; rye middlings, $60; white hominy feed, $67, all in 100-pound sacks. Cottonseed oil meal, $61.50; linseed oil meal, $60, in 100-pound sacks.

Hay and Straw.—There were 16 cars unloaded at 33d Street shed this morning, with 63 cars in the yard. New invoices are somewhat heavier this morning, trade very quiet and market is nominally without change, with feeling still rather firm. No straw available and values nominal.

Hay.—Large Bales, Timothy, No. 1, $50; No. 2, $46@48; No. 3, $44@46; Shipping, $43@45; No grade, $25@30.

Clover, Mixed.—Fancy, $48; No. 1, $45@46; No. 2, $43@44. Straw. — Large, Bales, No. 1 rye, $24; No. 1 oat, $16; No. 1 wheat, $16.

Wheat.—No. 2, red c. i. f., $2.79; No. 2, hard winter, $2.79.

Corn.—No. 2, Yellow, $1.66¼.

Oats.—No. 2 White, 78c; No. 3 White, 77c; rye, c. i. f., $2.19½; barley, feeding, $1.21.

PITTSBURGH HAY AND GRAIN

—Sept. 11, 1920.

Receipts are very light, not nearly sufficient to meet the demand. All grades bringing top figures. Looks like a steady market for the near future.

Straw receipts and demand light with the exception of oat straw which can be placed readily.

Oat market dull, demand indifferent. Buyers holding off anticipating lower prices. Ear corn and shelled corn receipts about equal to demand. Market dull but steady. The following prices can be realized:

New and old No. 1 Timothy Hay, $38@38.50; new and old Standard, $36@36.50; new and old No. 2 Timothy, $33@34; new and old No. 3 Timothy, $29.50@30.50; new and old No. 1 light clover mixed, $33@34; No. 1 oat straw, $16@16.50; No. 2 oat straw, $15.50@16; No. 1 Wheat Straw, $15.50@16; No. 2 Wheat Straw, $15@15.50; No. 1 Rye Straw, $16@16.50; No. 2 Rye Straw, $15.50@16; new No. 2 White Oats, 71@72c; No. 2 yellow ear corn, $1.62@1.63; No. 2 yellow shelled corn, $1.61@1.62.

PHILADELPHIA HAY AND GRAIN

—Sept. 11, 1920.

Baled Hay and Straw.—Receipts, 84 tons of hay and 4 cars of straw. Trade was quiet but prices were steadily held. We quote: Old Timothy Hay—No. 1, none here; No. 2, $31@32; No. 3, $27@29; sample, $23@25; no grade, $18@21. Old clover-mixed hay, light mixed, $27@29; No. 1 mixed, $27@28. New hay, as to quality and condition, $25@30. Straw.—No. 1 straight rye, $17.50@18; No. 2 straight rye, $16.50@17; No. 1 tangled rye, $15.50@16; No. 2 tangled rye, $14.50@15; No. 1 wheat straw, $14.50@15; No. 2 wheat straw, $13.50@14.

Bran.—Was dull and prices favored buyers. We quote: Car lots, including soft winter bran, Western, in 100-pound sacks, per ton, $52@52.50; spring bran, per ton, in 100-pound sacks, $51@51.50.

Corn.—No. 1 yellow, $1.40@1.41.

Wheat.—New; No. 2 red winter, $2.56@2.58; No. 2 red winter, garlicky, $2.46@2.55.

Oats.—No. 2 white, 65½c; No. 3 white, 64@65c.

PHILADELPHIA DAIRY MARKET

—Sept. 11, 1920.

Butter.—Receipts, 1,876 tubs. As usual on Saturday there was very little wholesale trading and no important change in the general situation. We quote: Fresh, solid-packed creamery, fancy, high-scoring goods, 61@63c ,the latter for jobbing sales; extras, 60c; extra firsts, 59c; firsts, 52@56c; seconds, 46@51c; sweet creamery, choice to fancy, 62@64c; common to good, 51@61c; ladle-packed, as to quality, 43@45c; packing stock, 39@41c; fancy brands of near-by prints were jobbing at 68@71c; good to choice, 60@67c; fair, 57@59c.

Cheese.—Ruled firm, with demand absorbing the very limited offerings. We quote: New York, whole milk, current make, fancy flats, 29c; common to good, 25@28c; Long horns, 28½@29½c; single daisies, $28½@29½c. Jobbing sales of fancy goods, 30@31c.

NEW YORK MILK MARKET

—Sept. 13, 1920.

Altho receipts were not so heavy last week, demand was only fair and market reported flush in all parts of the city. Manufacturers of sweetened condensed milk are virtually out of the market at the present time. The September rate for 3 percent milk in 200-mile zone is $3.65 per 100 lbs.; 3.6 percent milk is $3.89 and 4 percent milk $4.05.

Receipts of milk and cream in 40-quart cans for the week ending September 11th, 1920 were as follows:

Railroad	Milk	Cream
Erie	39,781	4,376
Susquehanna	9,078	115
West Shore	13,741	2,077
Lackawanna	53,284	3,025
N. Y. Central (long haul)	193,847	4,341
Ontario	43,970	1,873
Lehigh Valley	56,781	1,077
New Haven	6,800	65
Pennsylvania	13,014	396
Other Sources	6,250	200
TOTALS	436,546	17,545
Same week last year	388,043	16,714

INTERSTATE MILK PRICES

—Sept. 13, 1920.

August milk prices continue in force for September.

TOBACCO MARKET

—Sept. 13, 1920.

The excellent condition of the growing crop of tobacco has become a matter of general comment the same presaging as it should a time of favorable market results, provided holders do not yield to the various influences which, as usual, will be brought about to adversely influence the situation. The crop has been described as "by far the most luxuriant in many years." It is noted that plants have grown so vigorously that in many instances they have been topped and well mature as many as twenty-one leaves as compared with about thirteen in the average season, and as low as nine in very dry seasons. Applying the old rule that every leaf per plant will yield, upon the whole, 100 pounds per acre we should have the phenomenal amount of 2,100 pounds, per acre this year as compared with 1,300 in an average year, and 900 in a dry season. Cutting is now being vigorously pushed and unless untimely frost or early freezing should intervene the great crop soon will be safely housed.

But Pennsylvania is not alone in the excellent condition of its tobacco as shown by reports from other localities. In Wisconsin, for instance, an excellent crop has been grown much of which has been contracted in the field, subject to delivery in good condition, at prices ranging from $30 to $35 per cwt. for offerings of binder quality and about $10 per cwt. for fillers. And it is said that those are in reality poor sales when considered in the light of the present brilliant outlook. In New England, too, the heretofore gloomy prospect has yielded to favorable conditions and the situation is reported as quite favorable with many crops being contracted at favorable prices.

APPLE PRICE OUTLOOK

All sections of the United States report an unusually small volume of sales of apples for this season of the year. The prevailing uncertainty over the price outlook together with financial stringency and high cost of operation has made buyers extremely cautious. The crop is unusually large the August first estimate for the total farm crop being 213,187,000 bushels against yields of 147,457,000 in 1919 and 169,911,000 in 1918. The estimate of the yield of the commercial crop on August 1st was 32,588,000 barrels compared with 26,174,000 barrels in 1919. The comparatively wet season over most of the apple belt has resulted in an improvement in the crop yield during the summer. The gain in New York during August was 1,300,00 barrels.

The early apple crop was larger than usual and prices went thru a decided slump before the season was over, some New York growers hauling back apples from central points to use for hog feed because of inability to sell them at any price whatever. The commercial crop is not uniformly good. The Northwestern states have about ⅔ of the normal yield and are especially short of Jonathans. The crop of the middle west and eastern states is unusually good. The commercial crop for the seven states New York, Pennsylvania, Virginia, Ohio, Indiana, Illinois and Michigan is about twice as large as it was last year and makes up practically half of the total crop of the country. A great deal of new orchard, particularly in New York state have just come into bearing with a good yield this year.

Owing to the high price of containers and of the labor involved in packing there is a decided tendency to sell in bulk in the eastern sections. This is expected to produce considerable pressure upon the market in the early fall months as such apples cannot be held to advantage. Storage rates have been increased 65 cents per barrel in some of the New York storages and all of the available space has been sold out for weeks.

Growers assume that the increased freight rates will be passed on to the consumer resulting in a higher level of prices on that account. Barrels are costing $1.50 and baskets $4 a dozen. Pickers in New York state are expecting as high as 30 cents per bushel making the total cost of picking, grading, packing and delivery from 80c to $1 per barrel. As a partial offset to these high costs ocean apple refrigerator rates have been lowered from $4 to $3 thus giving slight help to the export outlook.

Enough transactions have not been closed as yet to make reliable quotations possible. It is evident that apple dealers will endeavor to break the market to a very low point before they will purchase any large quantities. The prices now being offered in New York state leave little for the grower after paying for labor and containers.

About 4,000 disabled soldiers, sailors and marines, according to a recent census, are taking agricultural training under the Federal Board for Vocational Agriculture.

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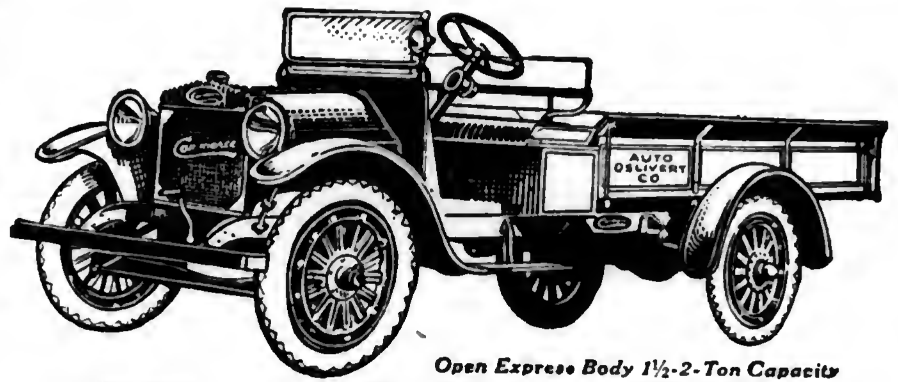

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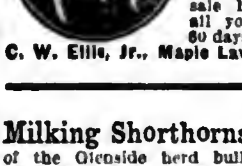

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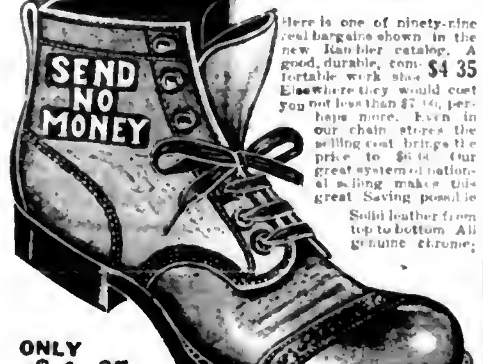
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CLEARWATER ON CLEARWATER HARBOR AND GULF OF MEXICO. Wonderful surroundings, surf bathing, good climate, comfortable accommodations, hotels and cottages. Citrus groves, trucking, chickens and dairying. Good land, sufficient rain, luxuriant growth. Write Board of Trade, Clearwater, Fla.

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HAY Ship to The Old Reliable House DANIEL McCAFFREY'S SONS 623-25 Wabash Bdg., Pittsburgh, Pa

THE VALVE MECHANISM OF THE GAS ENGINE

The four-cycle engines have two valves one known as the intake, which admits the mixture of fuel vapor and air into the engine cylinder, and the other called the exhaust, which opens so that the burned gases may pass out. The intake valve may be either automatically or mechanically operated. Exhaust valves, because of the high pressure within the engine cylinder at the time they must open, are always mechanically operated. If the action is automatic, the valve is drawn in during the suction stroke, thus opening the valve passage, and the valve is held open as long as the suction is greater than the tension of the valve spring. When the suction decreases, the spring pulls the valve shut and holds it shut. If the valve action is mechanical, there must be a train of mechanism which causes the valve to open and close at certain times.

This mechanism usually consists of two gears, a cam, a push rod and a rocker arm. One gear is mounted on the "crank shaft" and meshes with and drives another gear mounted on another shaft called the "cam shaft." The direction of rotation of the cam is therefore opposite to that of the flywheel. The gear of the crank shaft always has one-half as many teeth as the cam shaft gear, which results in the cam that revolving once every time the crank shaft revolves twice. This must be so, for every time the cam revolves once, the valve to which it is connected will open and close. If the cam were mounted on the crank shaft the valve would open and close twice during a cycle, whereas each valve must open but once during a cycle.

A Cam Defined

A cam might be considered as a circular piece of metal, which has been flattened in one or several places, so that the distance from the center to the edge is greater in some parts than in others. If, therefore, a rod carrying a roller were held against the cam as it revolves, the rod would be pushed up by the high parts of the cam and move down when the roller passed over the lower parts of the cam. Cams used for the operation of valves usually cause but one forward and backward movement to one revolution of the cam, that is, they are circular except over a part of their circumference which is pushed out. One man remarked that such a cam was "merely a circle with a bump on it," and such it is.

The other end of the push rod is in contact either with the valve stem or a rocker arm depending upon the engine design. If in direct contact with the valve stem, the upward movement of the push rod, caused by the cam forcing the roller on the push rod away, pushes the valve in. The downward movement of the push rod releases the valve which is closed by the action of the valve spring. The time during which the valve will remain open depends for one thing on the shape of the cam. If the bump on the cam is pointed, the valve will stay open but a short time while if the bump is broad the valve will remain open much longer.

A picnic supper need require no more preparation than any other meal if you have a "picnic shelf" in the pantry where all the necessary emergency foods and equipment can be kept.

PASSING EVENTS IN PICTURES

(Photos Copyright by Underwood & Underwood.)

1—Chas. Ponzi, whose huge financial dealings landed him in jail, with his wife.

2—Football coaches are given a course of instruction at Columbia University, N. Y. C.

3—Ida Hopkins, 12 years old, Queen of Asbury Park Baby Parade.

4—Dorothy Gish Sails for Vacation.

5—Peggy Wood, noted actress arriving at N. Y.

6—Petriva Jackson, one of Washington's most beautiful Children.

7—Pilot Town, in the Delta of the Mississippi, inhabited by Pilots only.

8—"Our Mary" of movie fame home again.

9—A recent photograph of Queen Marie of Roumania.

10—Homing Pigeons in Training for 500 mile Derby to be flown from St. Louis soon.

11—Cardinal Gibbons, says "World is Growing Better."

Facts in BLACK & WHITE

189,350 Registration Certificates Issued in a Year

During the fiscal year ending April 30, 1919, 189,350 certificates of registration of pedigrees and transfers were issued by the Secretary's office of The Holstein-Friesian Association, producing a gross revenue of $212,257.50. To the student of facts this great volume of business, of but one department, is sufficient evidence that the administration of Holstein affairs has been able and sound. An owner of purebred Holstein cattle is a partner in all the benefits directly or indirectly arising from this progressive management.

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CONSIGNMENT SALE

of Registered and A. R. O. Holstein Friesian Cattle, at the HORNLESS HOLSTEIN FARMS, CLARKS SUMMIT, PENNA., 10 miles north of SCRANTON, PENNA., on the D. L. & W. Railroad and the Northern Electric Railway. ABOUT 100 HEAD. MANY of them are sired by the BEST DAMMED BULL of the breed, a son of the WORLD'S RECORD SENIOR 4 YEAR OLD, KEYSTONE BEAUTY PLUM JOHANNA, with 25,787.5 lbs. of milk, 1294.7 lbs. of butter, strictly official in a year, 4% IN LONG TIME TEST. Daughters of cows with semi-official records from 600 lbs. of fat and up; sons of 30 lb. cows; son of a cow with 1050 lbs. in semi-official test. 25 animals from a herd under Federal Supervision. Many of the animals sold on a 60 day retest.

We have on hand a number of bulls and bull calves at private sale before October 1st. NATIONAL HORNLESS.—Geo. E. Stevenson, Clarks Summit, Pa.

BULL CALVES at BARGAIN PRICES

We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred, healthy bulls, from a clean, Tuberculin Tested Herd at reasonable prices. King of the May—Dolly Dimple—Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees.
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STEVENS HOLSTEIN FARM

of Cortland, N. Y., offers pure bred cows and calves, all ages; also extra high grade Holstein heifer calves $20 each, express paid in lots of 5; 2 heifer calves with purebred bull calf $75. Grade Holstein cows in carload lots. Wire me to meet you.
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Eight Reg. Jersey Heifer Calves, from two weeks to 18 months old. Tuberculin tested; herd under federal supervision.
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Look! $14 BABY CHICKS a 100 up!

By insured parcel post, postage paid. 40 breeds chicks, 4 breeds ducks. Get August and September chicks for February and March layers. Catalog free, stamps appreciated.
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Hay and all farm products wanted. Daily demand at good prices. GIBBS & BRO., 325 North Front St., Philadelphia, Pa. Estd. in 1844.

EGGS Etc.—Small consignments from producers in your territory bring very attractive prices NOW. Prompt returns always. Refer to Dun or Bradstreet. Ship us your next case. ZENITH BUTTER & EGG CO., 170 Duane St., New York, N. Y.

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Farm range, prize winning Buttercups. Investigate this wonderful variety. Write for circular.
MAPLE LAWN FARMS, CORTLAND, N. Y.

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Mammoth Pekin, Giant Rouen, and Indian Runner Ducks and Drakes, $2.50 each and up.
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Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
SELBY PRODUCE CO., PHILADELPHIA

S. C. White LEGHORN COCKERELS, 4 mos. old, $2.50 each, prepaid. Good chance to improve your flock. MRS. C. E. STUBY, BUFFALO MILLS, PA., R. 1.

Silver Spangled HAMBURG COCKERELS, 11 weeks old, $3.00 each.
PERLEY W. LAWTON, Tiadaghton, R. 1, Pa.

Miscellaneous

Registered Yearling Shropshire Rams For Sale
Chesterbrook Farm, Berwyn, Pa.

HOUNDS

For Coon, Skunk, and Rabbit Hounds; also puppies and started dogs. Buy now and know your dog when the season opens. Stamp for reply.
H. C. LYTLE. Fredericksburg, O.

REG. BIG TYPE POLAND CHINA PIGS, Hampshire Down Sheep, all from the best blood and priced right. C. E. SECHLER, MARKLETON, PA.

Chester Whites and HAMPSHIRE SHEEP. Write your wants. We can please you. TWIN BROOK FARM [illegible]

LIVE STOCK

LIVESTOCK NOTES

By Prof. W. H. Tomhave

Select Breeding Gilts

Gilts that are to be retained as breeding animals in the herd should be selected and separated from the rest of the spring crop before fall fattening is begun. These gilts should be selected with care and developed in a manner different from that for the hogs that are fattened for market.

If the pigs are pure bred and a number of brood sows are kept, they have no doubt been ear-marked for identification. Such gilts should be selected from brood sows that produced large litters and have proven reliable breeders. Good individuality should be picked out with a view of developing a uniform herd and improving the brood sows in the herd. True-to-breed type, if the hogs are pure bred, a long smooth body, a good strong back, well developed hams and plenty of bone should be the outstanding points to be kept in mind in making the selection. Length of body seems to be closely associated with large litters and rapid development. A strong back is desirable and essential in a good brood sow if she is to remain in the herd for a number of years. Young pigs that show weakness of back before they are well developed as a rule do not improve with age but become weaker as they become older.

These pigs should possess smooth, deep sides that are free from wrinkles as smoothness is one of the outstanding desirable points of a good brood sow. The feet and legs of every bone of excellent quality should be the ideal. Weak pasterns and too light bone should always be discriminated against and a good reason for discarding a pig from the breeding herd. Such weaknesses are usually transmitted to the offspring and difficult to eliminate from a herd unless it is closely guarded against in selecting breeding animals from time to time. Such pigs should be separated from the rest of the pigs and given a ration made up largely of protein feeds. They should have access to forage crops and plenty of exercise which will aid in their proper development. Fattening feeds such as corn should be properly balanced with protein feeds.

The Wool Situation

There is no wool market at the present time and it may be some months before a satisfactory market is established. It does not seem possible, however, that such conditions can prevail for a very long period of time as the people will have to have cloth and woolen mills will want to operate. There is practically no wool moving from the producing centers to the manufacturer and no one knows what wool is actually worth on the market. A few sales have been made but none of sufficient importance to establish a market. Local buyers have in some instances made an attempt to purchase wool at a ridiculously low price simply to speculate on the product. They have not been very successful and have secured very little wool.

In many of the eastern counties the farmers have pooled their wool thru the county or local association and are holding it until there is a change in the market. This is the most satisfactory way for the farmer to dispose of his wool. It may become necessary to wait for some time before the product can be sold at a satisfactory price, but when it is sold it will bring a price that will be better than any price that can be secured by selling the wool as a small lot.

In many instances the farmers are in need of the money to carry on the business of the farm and produce the wool crop for next year. Such farmers can not afford to sacrifice the present wool crop at such a low price if they can find any other way of financing the business temporarily. The difference in the price that can be secured at present and the price that is likely to prevail during the next six months will pay big interest on any money that may be invested in the wool crop. The situation during the past few months has been anything but encouraging to the sheep and wool industry but there is a better day coming for those who have faith in the industry and can stem the tide during the present unsettled period. "Pool the wool with a county or local wool association and wait for a more satisfactory wool market," should be the slogan of every wool producer.

A PLAN TO MOVE THE WOOL CROP

When Congress reconvenes in December the American Farm Bureau Federation will urge immediate passage of a bill establishing a credit with Germany and her former associated countries equal in amount to the net proceeds of the sale of alien property in this country during the war. The money received by the Alien Property Custodian during the war amounted to nearly $1,500,000,000 and the remainder now in the United States Treasury after various claims and expenses are allowed, will run well up toward a billion dollars. Sooner or later this money must be turned over to Germany and her associates and now is the time the central European countries can use it to best advantage. The raw materials which this money would buy in this country are the very things needed by Germany to start and operate her factories.

A careful survey of the world's wool supply gathered from the best available sources—some direct by cable—shows that the world's wool stocks are somewhat greater than usual. Where the usual holdings prior to 1919 amounted to about half a year's supply, or around a billion and a quarter pounds, the stocks now available seem to amount to about a full year's supply. But nearly all of this surplus is of the coarser grades. Apparently there is no real surplus of the finer grades of wool—the kinds which we use in this country to manufacture our clothing. The accumulation of coarse wool stocks seems to be a direct result of the inability of Germany and Austria to buy and consume their usual quotas. These markets have been practically closed for a long time now, and as a result coarse wool stocks have accumulated in all parts of the world.

The Quality Line

For over 32 years, thousands and thousands of farmers and breeders of high grade live stock and poultry who realize the necessity of using high class preparations, have used

INTERNATIONAL Live Stock and Poultry PREPARATIONS

If you have never used them, you have missed an opportunity of increasing your profits greatly

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Swine

HAMPSHIRES

All ages. Strong and vigorous stock. When you buy you want the best, don't you? Then write us. Inspection invited. ROSS B. WITMER, LAMPETER, PA. Member Lanc. Hampshire Breeders' Co-operative Association.

REGISTERED DUROC-JERSEY PIGS

$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs.
C. W. Ellis, Jr., Maple Lawn Farm, Cortland, N. Y.

FOWLER'S PURE BRED HAMPSHIRES Will please you. Best and largest herd in East.
THE FOWLER FARMS, MACUNGIE, PA.

Try Reg. Big Type Spotted Poland Chinas. The hog of the hour. Write for prices. Satisfaction guaranteed or money refunded
G. CLYDE THOMPSON, Chambersburg, Pa., R. 10.

Large Type Reg. Berkshires of all ages for sale. Select a breeder from a large litter. Pay when you see stock. No cash in advance.
DAVID WIANT, HUNTINGTON MILLS, PA.

REG. DUROCS. Several Sows and service boars for sale. Also good spring boars. Good type and breeding. Northumberland Co. Duroc-Jersey Breeders' Assn., J. M. Fry, Corresponding Secy., Sunbury, Pa.

O. I. C. Pigs, 8 weeks old, ready to ship, registered free. Silver's strain. Selected grade pigs, 6 weeks old. THE OAKS DAIRY FARM, WYALUSING, PA.

Special Sale REGISTERED DUROC SOWS bred for Summer farrow, $65.00 each, registered and express paid.
BELROSE FARMS, RICHFORD, N. Y.

Reg. Big Type Spotted Poland Chinas, 4 fine 8 months old boars, a few sows and one large boar. Guaranteed to please. Write for prices.
ROY L. HOFFMAN, Hagerstown, Md. R. 4

TARRYMOOR BERKSHIRES
Quality Growthiness Prolificacy
We guarantee satisfaction.
Robt. E. Atkinson, Wrightstown, Pa. Bell Phone

HEAD YOUR BERKSHIRE HERD with a son of Highwood Majestic. I have five left from spring farrow. Write for prices and pedigrees. MARVIN BEACH, Franklin, N. Y.

Reg. Berskshires with size and quality; long bodies, good in back and legs. Spring pigs and bred sows.
NEARBY STOCK FARM, POTTSGROVE, PA.

CHESTER WHITES For Sale. Service boars and young pigs, all ages.
ALLAN R. MORTON, ASHVILLE, N. Y.

Nelson's Berkshires 5 young Farmer's boars, with size and quality. Guaranteed to please.
W. D. NELSON, JR., Marshallton, Del.

Big Type Poland Chinas All ages. Write your wants
KEYSOR & CLELAND, GREENWICH, OHIO

REG. O. I. C. PIGS, Aug. 1st farrow. Quality guaranteed. Two gilts, 7 months old.
L. D. LAUSHEY, SMOKETOWN, PA.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, Center Valley, Pa.

REG. LARGE ENGLISH YORKSHIRES. Short nose, good length, prolific and quick-growing type fall pigs for sale. J. Homer Reams, Luthersburg, Pa.

Chester Whites Boars and Sow Pigs. Bred Sows. Collie dogs.
ARCADIA FARM, BOX D, BALLY, PA.

O. I. C. Males 2 to 4 months old. Satisfaction guaranteed.
BRUBAKER BROS., Star R. Cocolamus, Pa

TELL the advertiser you saw adv. in Pennsylvania Farmer.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Excessive Kidney Action.—Six-year-old mare drinks too much water; passes large quantities of high-colored urine, suffering pain while doing so. She is inclined to bloat some. J. H., Belvidere, N. J.—Give a teaspoonful of acetate of potash in drinking water twice a day.

Splint Lameness.—About a month ago my four-year-old mare commenced to limp on right fore leg, only showing lameness when starting. Have been working her, seldom driving faster than a walk. She has small hard bunch on inside of leg, two inches below the knee. She is quite lame when trotted. W. H. D., Gainesville, N. Y.—Doubtless your mare has splint. Either paint bunch with tincture of iodine, daily, or apply one part red iodide of mercury and eight parts fresh lard once a week. Perhaps she strikes shin with opposite foot; if so, apply shin boot.

Sweeny.—Horse sprained his shoulder seven weeks ago. I applied liniment once a day and at the end of four weeks he seemed to travel sound. Now we have discovered he was sweenied. Can he be cured? N. H. L., Georgetown, Del.—If shoulder muscles are slightly inflamed yet apply equal parts turpentine, aqua ammonia and raw linseed oil every day or two. In cases of chronic muscular atrophy where there is no inflammation, have your veterinarian use rectified oil of turpentine, injecting it subcutaneously with a hypodermic syringe at several places in the upper half of the atrophied area. About four or five drops at each place are sufficient, if the rectified oil is used. If your horse is high strung, he will become quite excited, perhaps paw violently for eight or 10 hours, and the shoulder will swell considerably. Three days after you have this treatment applied, put the horse to work and he should get well. Be sure and use the rectified oil and have the work done in a cleanly manner.

Cows Fail to Come in Heat.—Four cows have not been in heat since June. F. J. M., Great Bend, Pa.—Give each cow 30 grains of ground nux vomica and 60 grains of ground capsicum in feed twice a day until they come in heat. Feeding a quart of stove-dried oats to a cow first thing in the morning is believed to bring her in heat.

Garget.—Infected Udder.—All four quarters of my cow's udder seem to be diseased and our local veterinarian calls it garget. He prescribed Epsom salts and saltpeter, which we gave for two weeks, but she is no better. G. C. R., Trenton, N. J.—Your cow suffers from infectious mammitis. Has she been tuberculin tested? Rubbing the udder with iodine ointment three times a week will help her.

Teat Stricture.—Guernsey heifer, fresh two weeks ago, has fine sack and large teats, but it is almost impossible to draw milk. J. F. K., Pittsburgh, Pa.—Have your veterinarian slit teat canal on four sides; then she will milk easier.

Watch your steps; an efficient housekeeper will use judgment to prevent useless running back and forth.

Multiplying Farm Hours

THE FARMER who is not properly equipped, has this problem to contend with: getting his farm work done on time and, at the same time, doing necessary hauling that requires labor and horses which cannot well be spared from pressing seasonal work on the farm.

During the days of plentiful, cheap labor, this problem was partly solved by hired help. But today it is being met in an entirely different way—by **International Motor Trucks.**

These efficient hauling units multiply farm hours—save for essential farm work about two-thirds of the time that was formerly spent on the road, in addition to saving the horses for work in the fields.

Do you feel the need of more farm hours? Do you begrudge the time that you devote to hauling farm products to town and needed supplies back to the farm? Does the distance between your farm and your local market sometimes seem much too far? Is the working efficiency of your horses impaired by hard trips to town?

Think about this; and while you are thinking, drop a post card to the address below so that we can mail you a pamphlet that will tell you how to multiply your farm hours and simplify your hauling—with an **International Motor Truck.** There is a style of body and a size of truck for every hauling requirement—¾-ton to 3½-ton capacities.

INTERNATIONAL HARVESTER COMPANY
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Nine Reg. Guernsey Bulls, 1 to 10 mo. old. Sires, Langwater Foremost, Glen Gable Friendship, 3 sired by son of Glenwood's Buttercup, 769 lbs. fat at 3 years. H. B. SHENK, ELVERSON, PA.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale.
MILLARD E. BASEHOAR, Littlestown, Pa.

MILKING SHORTHORNS, sons of Glenside Royal Stamp, grandsons of General Clay; also a few females. C. M. KENNEDY & SONS, ULSTER, PA.

We will give the use of a finely bred registered Holstein bull for 3 years to any responsible farmer. Write for our plan.
LIVESTOCK IMPROVEMENT CO., INC., CHARLTON, MASS.

Reg. Holstein Bull Calves, from officially tested dams and a 30-lb. sire. Write for prices, pictures and pedigrees. Walter M. CRUTTENDEN, Forty Fort, Pa.

CALF BORN JULY 6th. Guernsey bull, Dam A. R. 7 May Rose crosses, at $75. Locust Lawn Farm, Bird-in-Hand, Box P, Lanc. Co., Pa.

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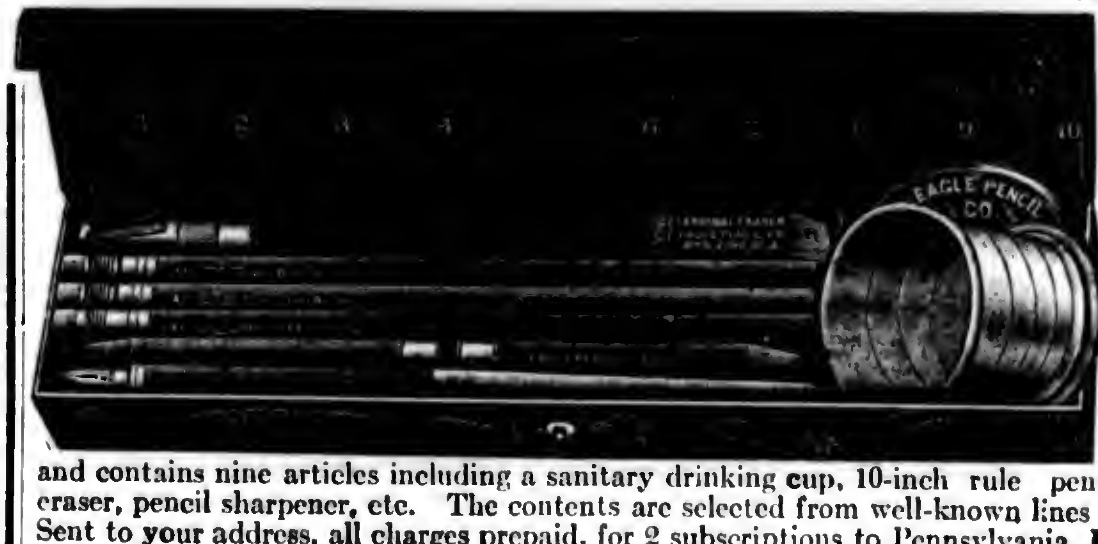
for choice registered and high grade Holstein-Friesian heifer and bull calves, $25 and up. Write us your wants. Browncroft Farms, Cortland Co. McGraw, N.Y.

SUNNYBROOK GUERNSEYS
40 head, free of tuberculosis, bull calves for sale.
EDWIN S. MAULE, COATESVILLE, PA.

REG. SHORTHORNS FOR SALE. Cows with calves; heifers, bred and open; also some choice young bulls. Farmers' prices. R. H. LYLE, CADIZ, OHIO.



School Box Outfit

This School box outfit is of imitation leather, is durably made, has single clasp and contains nine articles including a sanitary drinking cup, 10-inch rule pencils, penholder, rubber eraser, pencil sharpener, etc. The contents are selected from well-known lines and are of the best. Sent to your address, all charges prepaid, for 2 subscriptions to Pennsylvania Farmer for the balance of this year and all of next to January 1, 1922, at 75c each.

PENNSYLVANIA FARMER, 261 South Third Street, Phila., Pa.

COUNTY NOTES

Cumberland County, N. J.—Rain every day until it is seriously interfering with work. Crops are good, but some of the prices are discouraging. Tomatoes 25c a basket. Potatoes $2.10 to $2.25 a hundred. Peaches have been as low as 60c a basket. Green and ripe tomatoes both rottening. Corn looking good. Potatoes large. Beets marketed. Cabbage plentiful and bursting. Local water melons and cantaloupes in market. Roads bad on account of rain and heavy trucks. Oats heavy.—C. J. S.

Blair Co., Pa.—Too much rain. It has rained here every day for 18 days. Oats all spoiling in the field; also, some wheat out yet. It is growing in the shocks. Potatoes promise a fine crop but some are taking the second growth. Apples are very plentiful. Farmers are starting to make cider. Apples range in price from 15c to $1 per bushel.—H. M. McVey.

Snyder County, Central Pa.—The weather during August has been very peculiar compared to other years. We had very warm weather, unusually cool weather, and 24 rainy days in August. Oats crop is half ruined on account of rains. Corn is looking good. Buckwheat will yield well also. Potatoes are yielding good. Pasture is very nice and all stock looking good. Markets: — Wheat, $2.25 bu.; corn, $1.40 bu.; oats, 80c bu.; rye, $1.60 bu. Butter, 54c lb. Eggs, 46c dozen. Lard 20c lb. Chickens, 24c lb. Flour $12.80 bbl. Middlings, $3.40 cwt. Chop $3.50 cwt. People generally well except colds resembling mild form of flu.—S. D. D.

DELAWARE NOTES

The tomato crops are all large and fear has been expressed that the continued rains may cause rotting. As yet no rotting has set in. The present low prices of tomatoes have had effect in causing the canners to provide for the running of only parts of the factories. The canners are of the opinion the prices do not pay the farmers for growing, picking and delivering the crop.

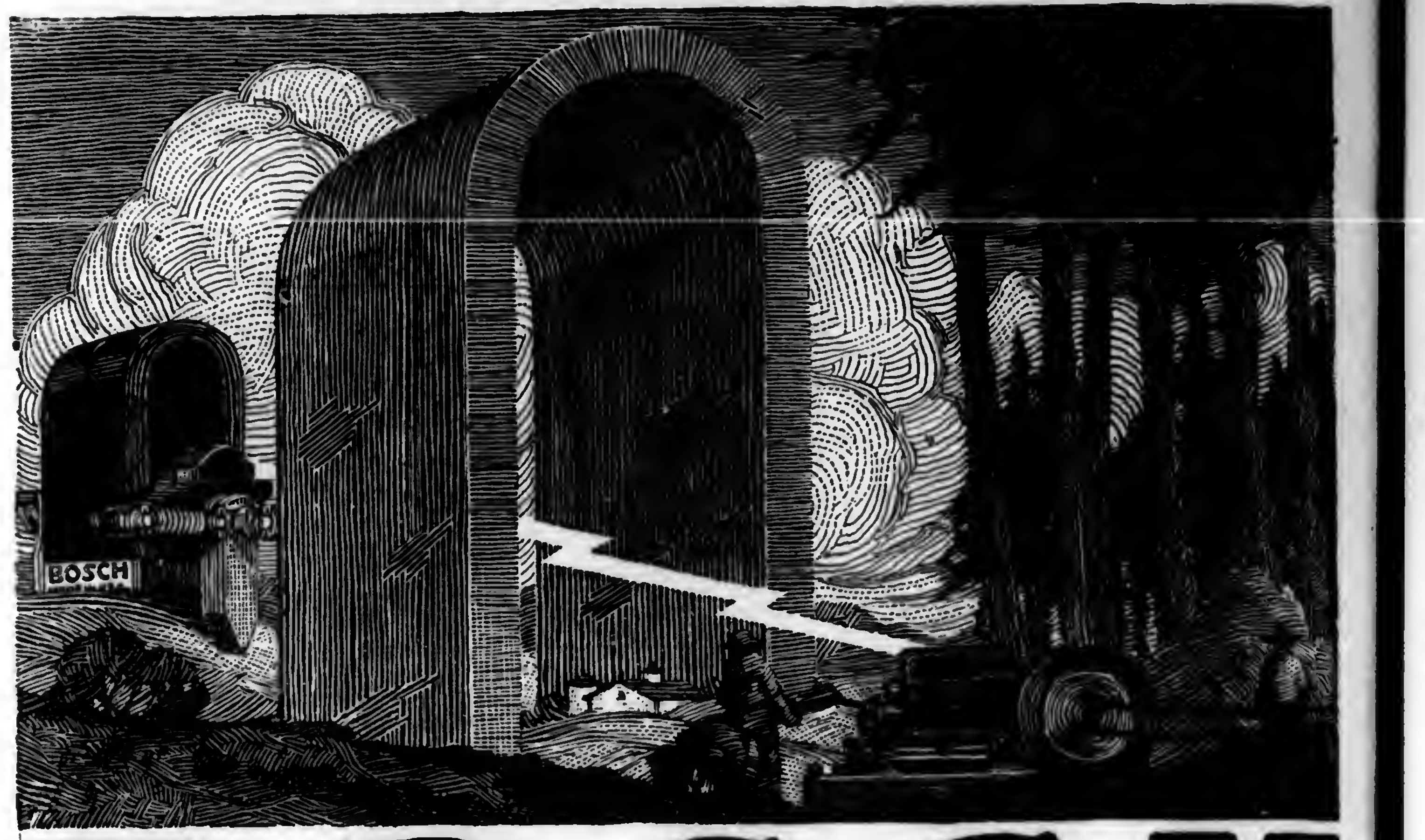
Nearly all the farmers in lower Delaware, especially those belonging to the produce Growers' Association are letting their tomatoes lay in the fields. They are demanding fifty cents a basket and have decided not to pick their crop unless their demands are met by the canners.

The corn crop this year is said to be the best crop Delaware has ever had. Rain does not have very much effect on corn.

Peaches are said to be very plentiful this year and there has been about 40 percent more shipped this year than last up to the present time. The estimated yield of wheat this year for Delaware is about 18 bushels per acre in comparison with the yield last year of from 10 to 12 bu.

Recent rains have had some effect on preventing farmers from putting in alfalfa and fall wheat but there is still time in which these crops can be put in the ground.

The recent rains that have prevailed thruout this section almost uninterruptedly for the past two weeks have seriously damaged the late white potato crop, which had given all signs of being equal to the record of the early crop. Unless a clear spell of dry weather comes soon, most of the potatoes will rot under ground before they are developed enough to dig.—Karl P. Thompson.



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ESTABLISHED 1880
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Information on the Feed Market

The Present Situation Reviewed for those who Buy Concentrates and Grain--By Sanders Sosland

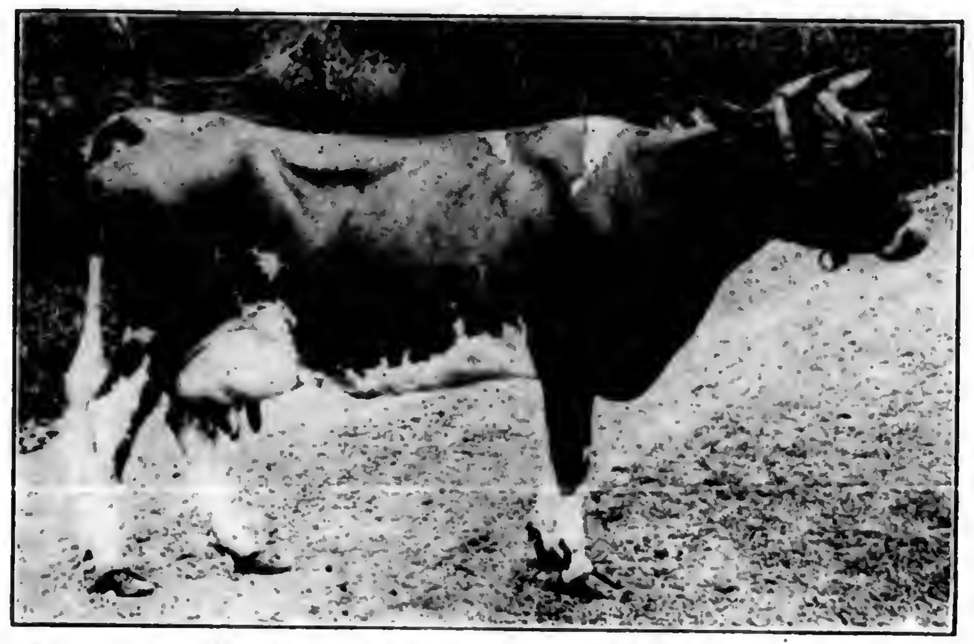
Knowledge of the fact that demand for feedstuffs in commercial channels must soon broaden from day to day is tempering bearish sentiment in market circles. Pastures, after a season of luxuriant growth, are beginning to give way in spots, and this will probably become more and more noticeable with the advance of the fall, particularly after a frost. Also, the stocks of roughage that have been utilized as an excellent substitute for commercial feedstuffs, are disappearing, and feed handlers are now reporting a sprinkling of inquiries from sections in which home production is sufficient for only a few months' requirements of the feeders. Even at the present writing, only shortly after the opening of the fall season, there is apparent an improved demand from the small interior retail feed merchants, indicating both enlarged buying by the feeder and a desire on the part of the dealer to accumulate a reserve to meet the needs of his community.

But is the probability of a strengthened demand sufficient to offset the influences which still are tending to depress values for feeds? The largest crop of corn in history is now maturing and soon will be moving into markets; the sorghum grains, kafir and milo, also promise a record crop which will be felt by poultry breeders and other mixed feed consumers of the East probably to a greater extent than in any other section, with the exception of the Southwestern producing territory itself. There is an abundance of hay, and cottonseed and flaxseed promise greater yields than in recent years.

Cottonseed Feeds

The high protein feed concentrates, particularly cottonseed cake and meal, have undergone further price depression, but the downward trend has been partially checked. One of the important influences contributing to the slightly firmer feeling of the market in recent weeks is the continued cool and wet weather, which is causing much damage to the growing cotton crop and retarding maturity. Also, the efforts of speculators who have sold large quantities of cottonseed cake and meal "short" for deferred shipment to cover or "buy in" on their contracts have brought about temporary strength in the market. But the fact remains that actual consumptive demand for cottonseed feed is extremely light, and any temporary strengthening of prices resulting from speculative buying cannot long hold. Feeders are disappointed over the position of the cattle market, and, while it is quite probable that demand will increase with the advance of the fall season, the sales to feeders will not be relatively greater than was noted during the summer months. The fact that the market for stockers and feeders is suffering from a lack of demand will tell later in the season in the cake and meal trade.

Crushers in Texas, some of whom already have begun moving new crop cottonseed cake, the first of any importance in the South, have reduced their quotations to around $47 to $48 a ton for prime 43 percent protein grades for October-November-December shipment. Spot offerings or all September may be obtained around $49 to $50 a ton. Prices on the deferred cake and meal shipments show a recession of about $5 within a month, with the spot market, which is easing off as a result of increasing stocks of the new crop feed, showing a decline of as much as $10 from the early part of August. Purchases of cottonseed feed for deferred requirement do not yet seem advisable, close observers of the market anticipating a level of around $40 to $45 a ton, basis in Texas and the surrounding territory in the near future. Seed is being purchased from planters around $25 a ton, hardly a third of the price a year ago, and the recent depression in cotton also has increased the bearish position of the market. Much depends, of course, on the final outcome of the crop in the south, and prospective buyers of cake and meal will do well to study progress of cotton closely.



Dimple Queen of Wakpala; 9,064 lbs. Milk, 508.36 lbs. Butter in 278 Days

Linseed Feeds

A firmer feeling has developed in linseed cake and meal, and prices have followed a course opposite to that of cottonseed feed. This is rather surprising, in view of the fact that cottonseed cake and meal already have been selling at a comparatively sharp discount under the flax by-product. Close observation of the feedstuffs trade as a whole fails to reveal any basis for bullishness in linseed feed. Domestic demand is light, hardly sufficient to absorb the current output of crushing plants, and practically no business has been worked to foreigners in recent weeks. In the Northwest, the principal crushing territory, linseed cake is quoted around $62 to $63 a ton, basis Minneapolis, with the Buffalo market on a slightly lower basis. Linseed oil has recently been quite weak and the threats of some crushers that they may be forced to shut down because the oil is below a cost of production level may tighten the cake and meal market. Where suitable, cottonseed cake and meal should be purchased instead of linseed feed.

Freight Rates and Hay

Much attention is being given in hay market circles to the ultimate effect of the increased freight rates upon demand for alfalfa by dairymen and other feeders of the East on Western terminals. To some distant points in the East the increase in freight rates amounts to approximately $6 a ton on alfalfa, forcing the delivered cost of the hay in the consuming sections of that territory to a level well above $50 and in extreme instances around $60 a ton. This is almost a prohibitive price and will naturally reduce the volume of shipments; at least, feeders will not make an effort to accumulate stocks as in previous years. The Southeast and South are in the same position as the East. On the other hand, marketings of alfalfa hay from the important producing sections of the Pacific Northwest also will be seriously retarded or almost entirely halted by the increased freight tariffs, the bullish effect of which may be sufficient to offset the check on the buying by sections distant from points of production. The rate on alfalfa from Idaho, Utah, Montana, Nevada, Wyoming and surrounding states, which produce an excellent quality alfalfa, to Kansas City, the largest alfalfa market in the United States, amounts to an average of more than $15 a ton, with the prices prevailing on that terminal not suffiently high to attract a movement of any consequence. Dealers of the Middle West and East are unable to bid more than $12 a ton, track, in the Pacific Northwest, tho producers are now able to sell their hay to the Far West at a price around $20 f. o. b. their station.

Alfalfa hay is in a rather easy position, following a period of abnormal strength. Eager buying before the advanced schedule of freight rates became effective, owing to efforts among consumers to offset the then prospective rate increases, forced values up about $5 a ton. Much of this advance has been wiped out already, and feeders, having stocks on hand, are awaiting a firmer tone in the market before making further purchases. Alfalfa is selling at an extreme range of $18 to $31 a ton in Kansas City, with other terminals on a freight differential. As to the future course of values for the legume, much depends upon the

(Continued on Page 4.)

FISK

In selecting a tire for your small car consider these points of the Fisk Red-Top:

FIRST: There's the size of the FISK Red-Top—not merely "oversize"—but a tire that is actually bigger than others. Take the most popular size: The FISK Red-Top 30 x 3½ is larger than the so-called standardized oversized tires.

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It is no accident that the FISK Red-Top gives such remarkable and uniform performance on small cars. The FISK Red-Top was designed for that purpose. It is a specialized product built to give to the small car owner the greatest ease in riding, the greatest possible mileage—and this with the least attention of any tire made.

Since it was placed on the market a little more than two years ago the FISK Red-Top has leaped into popular favor. Despite constantly increased equipment it is only recently that we have been able to catch up with the demand.

But now you can go to your dealer and get FISK Red-Tops promptly—and after getting them you'll realize what utmost satisfaction in tire value is.

The Fisk ideal guarantees a square deal—"To be the best concern in the world to work for, and the squarest concern in existence to do business with."

Next time—BUY FISK from your dealer

Time to Re-tire? (Buy Fisk)

Soils and Fertilizers

Conducted by Dr. J. G. Lipman

Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

ANSWERS TO QUERIES

Preparing for Potatoes

"I am planning for quite a large acreage of potatoes in 1921, and wish to settle the fertilizer question at the beginning. I have a sweet clover and oats stubble which will cut 2 tons of dry hay per acre. How much nitrogen, phosphoric acid and potash would this be likely to furnish towards the potato crop? Also, how many tons of barn-yard manure would be required to furnish the elements necessary for 200 bushels yield of potatoes? In addition to 8 tons of manure applied in the row in this sweet clover field, what other fertilizers are needed for a potato crop?"—G. E. S., Lehigh Co.

Sweet clover hay equivalent to two tons will contain in round figures 65 pounds of nitrogen, 18 pounds of phosphoric acid and 65 pounds of potash. The sweet clover and oat stubble is not represented entirely by leguminous vegetation. Some crab grass and other weeds are presumably included in the estimated two ton yield. However, the nitrogen in the sweet clover roots and stubble should make up the difference and, if the stand of sweet clover is good, the figures given are approximately correct.

A 200 bushel crop of potatoes will contain approximately 50 pounds of nitrogen, 20 pounds of phosphoric acid and 75 pounds of potash. Barnyard manure contains per ton 8 to 10 pounds of nitrogen, 3½ to 5 pounds of phosphoric acid and 9 to 10 pounds of potash. Five to six tons of barnyard manure would nearly furnish the plant food needed for a 200 bushel crop of potatoes. However, much of the plant foot in barnyard manure is not readily available. Some of it does not become available for many years. Under average conditions not more than 50 percent of the nitrogen and potash in good barnyard manure may be made available in the first year. Practical experience teaches us that 12 to 15 tons of barnyard manure would be required to grow a 200 bushel crop of potatoes under fairly favorable soil and climatic conditions.

The experience of the most skilled potato growers in Europe and America shows that the best results in potato production are obtained where combinations of barnyard manure and commercial fertilizers, or combinations of green manures and commercial fertilizers, are used. The best potato growers in New Jersey and on Long Island depend almost entirely on green manures and commercial fertilizers. They use from 1,500 to 2,000 pounds of fertilizer containing 4 percent of ammonia, 8 percent of phosphoric acid and 5 percent of potash. It has been pretty well established that well-rotted manure in moderate amounts and supplemented by commercial fertilizers make possible the largest production of potatoes. If eight tons of manure are to be used per acre in the sweet clover field, it would be advisable to apply in addition 500 pounds of acid phosphate, 200 pounds of nitrate of soda and 100 pounds of muriate of potash per acre.

Wants Stand of Grass

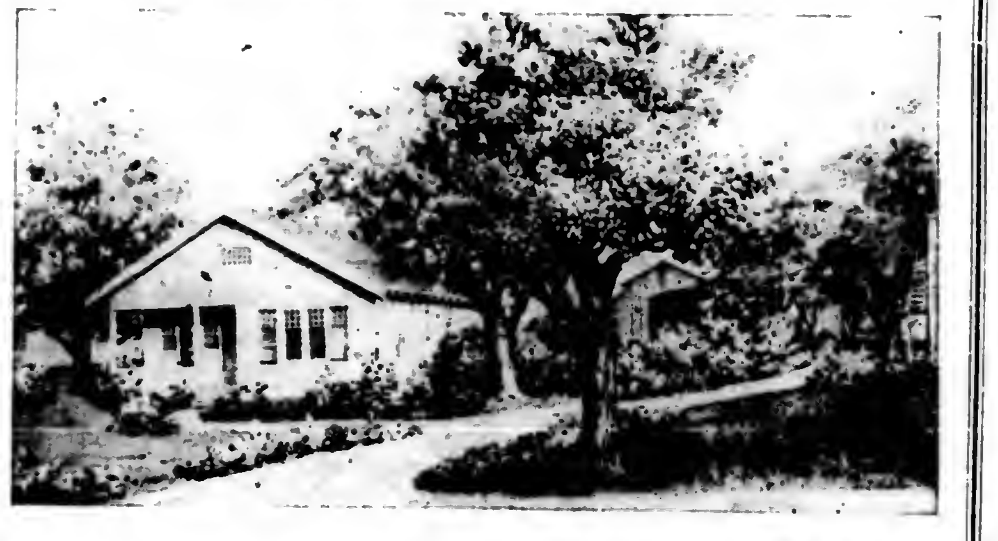
"My wheat crop yield was about 18 bushels per acre. For some reason or other, the grass seed failed to catch, and I do not wish to leave the field lie idle, so have concluded to sow it to rye. No lime has been applied for a number of years. What would be your advice as to treatment so that I would be reasonably sure of getting a good crop of rye and a good stand of clover and timothy next year."—A. B. L., Morris Co., N. J.

Neither wheat or rye are very exacting as to their need of lime. Timothy has more pronounced needs as to lime, and clover even more than timothy. Under the conditions as described, it would be desirable to lime the land, applying two tons of ground limestone per acre, or its equivalent in burnt and hydrated lime. Together with the lime, some available phosphate and a small amount of nitrogen would be desirable to give both the rye and the grass a good start. If the soil is sandy or is known to respond to potash fertilizers, a small proportion of potash in the fertilizer would be of advantage. A commercial fertilizer containing 3 percent of ammonia, 8 to 10 percent of available phosphate and 2 to 3 percent of potash, used at the rate of 500 pounds per acre, should be a good investment.

Wishes Permanent Sod

"We have a very steep hillside of about three acres which has not been broken up until this year for 80 years. We also have another steep hill field which we do not desire to farm. We would like to seed these both to grass so as to have a permanent sod. Would blue grass be the best? How would you proceed to get it?"—J. M., Frederick Co., Md.

Often barns are necessarily of greater size than the farm dwelling and so have the appearance of being more important. Yet the building of chief importance is the home. That fact can be made plain by manifesting special regard for the appearance of the house. Trees and shrubs will hide the encroaching service buildings and emphasize the true centre of interest—the home.
The pictures show a set of farm buildings before and after judicious planting.



Photos by U. S. Dept. of Agriculture.

Improvement Made By Proper Planting Home Grounds

Where the land is heavy and naturally well adapted to grass, the topdressing with suitable fertilizer would greatly improve the herbage. It would not be necessary in that case to plow it up and reseed. An application of ground limestone at the rate of one ton per acre, supplemented by an application of 300 pounds of acid phosphate per acre, would encourage the growth of white clover and of blue grass. If basis slag is obtainable, it may be used instead of the limé and acid phosphate at the rate of 500 to 600 pounds per acre. If one or both of the fields are to be plowed and grass seeded, it would be best to plow this fall and to put in rye or wheat so as to protect the land against erosion. After the wheat or rye is harvested in the following summer, the stubble should be plowed as soon as practicable, the land summer fallowed and seeded between August 15th and September 1st with a seed mixture whose nature will depend partly on the use which is to be made of the crop. If market hay is the crop aimed at, a mixture of Timothy 12 pounds, red clover 4 pounds and alsike 2 pounds, used at the rate of 20 to 30 pounds per acre should be satisfactory. If hay for home feeding rather than for the market is desired, the mixture should consist preferably of Timothy, 8 pounds, red clover 3 pounds, alsike 3 pounds, Kentucky blue grass 2 pounds, and red top 2 pounds. This mixture also may be seeded at the rate of 20 to 30 pounds per acre.

If the land has not been limed for a long time, it would be desirable to use lime in some form and also commercial fertilizer. A mixture consisting of 700 pounds of acid phosphate, 150 pounds of bone meal, 75 pounds of nitrate of soda and 75 pounds of muriate of potash may be applied shortly before seeding at the rate of 300 to 500 pounds per acre.

WHEN TO DIG BLIGHTED POTATOES

Late blight has appeared in potato fields thruout the greater part of the state and some growers, being concerned lest the tubers rot, are planning to dig them as soon as possible. To dig the potatoes early only increases the chances of their becoming infected and later decaying, according to the state college at Ithaca. There is less likelihood of infection if the tubers are left in the ground until all the vines are dead.

The reason for this is that the blighting vines while yet green contain the living spores of the parasitic fungus that causes the tuber rot. When the vines die the spores of the fungus also die and cannot then infect the plant or tubers. If the tubers are dug while these spores are alive, the spores come into contact with the potatoes, which are likely to become infected so that they will decay later. If the tubers are left in the soil, it is possible that the spores will not reach them unless a heavy rain occurs.

When potatoes are dug after the vines are dead, allowed to dry in the ground and the unrotted ones put in a cool dry storage house, the blight rot will not be troublesome. The blight parasite does not grow at a temperature below 40 degrees F.

HOME SEED SELECTION

That farmers will profit by the home selection and production of vegetable seeds is pointed out by the Ohio Experiment Station.

Transportation conditions and the supply of vegetable seeds during the past year have been such as to prevent many from getting their usual amount.

With home selection and growing it is possible to secure the best strains of many varieties.

In saving seed potatoes, it is well to select seed from hills that are above the average in production and resistant to disease. With beans and peas the pods free from discoloration makes it possible to secure strains which are not diseased.

With sweet corn several of the best ears should be allowed to ripen on the stalk. A piece of fly screen wrapped around the ears while ripening will protect these against rodents, birds and poultry.

A single good fruit of the tomato will produce enough seed for 100 or more plants. Well-colored fruits with small seed cavities are desirable.

Those who live for gain don't have nearly as good a time as those who live for service.

If you really need a new building, construct it now. If you can possibly get along without it for a while, wait for lower costs.

Mining and oil stocks are offered as short cuts to wealth; but none of them pay as well as digging for potatoes and using oil for farm machinery.

CALORIC SAVES FUEL IN ALASKA AND IN EVERY STATE IN THE UNION

Juneau, Alaska.
Jan. 22, 1920.
I have installed in my house one of your No. 48 CaloriC Pipeless Furnaces. We are quite pleased with it. It has heated our seven-room house through the months of November and December, with about 1¼ tons of soft coal screenings per month. By putting in a good fire at 8 A. M., it requires no further attention until 6 P. M.
F. W. Hebert.

You—like over 100,000 families—can solve the problem of high-priced fuel by installing the patented CaloriC Pipeless Furnace.

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The CaloriC is made by largest manufacturers of warm-air furnaces in world. Sold under Money-back Guarantee of your satisfaction. For old or new homes. No expensive installation. No plumbing—no pipes to freeze. Many users in this state—in your own neighborhood. Decide *now* for CaloriC warmth *this winter*. Write for book or see nearest dealer.

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CALORIC
THE ORIGINAL PIPELESS FURNACE TRIPLE-CASING PATENT
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That's the reason it bears the name FRICK
No matter what general Farm Power Work you want done the

FRICK WILL DO THE TRICK
SAVES LABOR AND TIME
IS DURABLE AND EFFICIENT
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WANTED Reliable agents, who will work and tell the truth. Write The French Nursery, Clyde, Ohio. Established 1863.

ALL WORKED TO GROW BIG CROPS

We are at the close of the season, and on every hand it is agreed that the farmers of this country have accomplished wonders in the way of producing food stuffs. When we entered upon the year, no one believed it possible to get such crops as are being harvested. Indeed, many predicted that we were in for a famine. The farmers could not to save their lives grow the needed foodstuffs. Now that the returns are coming in, it is evident that we have bumper crops everywhere. It is a matter of surprise and wonder that so much has been accomplished. How has it been done?

Let me tell you how it has been done in our neck o' the woods. To put it in one sentence, everybody has worked to the limit, and when I say "everybody," I mean, men, women, boys and girls and all. I have seen old men and women coming back from their home down-town and buckling down to work on the farm.

I know of grandmothers and wives and little boys and girls who have been after the cows when the men folks were busy with their work in the field, often traveling two miles to the far end of the pasture and then sitting down and milking several cows before the man got home to start to use the milking machine. I know of wives who have done chores, getting the milking machine ready, preparing feed for the calves, feeding the hens and even sweeping up the cement floor behind large herds of cattle.

In the field I know of women who have done a man's work in haying and harvesting, and boys that have saved many steps and added their part to the sum total of crop production.

Folks that live in the city know nothing about this. When they buy their farm products and enjoy them they little know how much effort and often real sacrifice of strength and comfort has been expended in their production. I have wanted to tell them the truth about it, and I believe what I have said has been true in great measure the country over.—E. L. Vincent, Broome Co., N. Y.

TOBACCO ROOT ROT CAUSES UNUSUAL LOSS

Root rot of tobacco for the past few years has been causing more loss than all other tobacco diseases and insect pests combined, according to the department of botany at the Ohio Experiment Station. The department conducts experimental tests with tobacco at Germantown, Montgomery County, each year. These tests compare rotations with different series of crops to reduce the root rot.

Root rot is identified in tobacco by failure of the plants to grow rapidly. This slow growth is due to the rotting of the feeding roots and when hot, dry weather comes on the plants wilt quickly.

Sometimes when seasons are favorable to growth the root rot does not show so much damage, altho the dried leaves of tobacco have a dead, papery appearance and feel harsh to the hand.

Sterilizing plant beds with steam each year seems to destroy root rot in the seedlings. In some tests the root rot has been eradicated from seedbeds by covering with a layer of sand, but sterilization is generally relied upon.

INFORMATION ON THE FEED MARKET

(Continued from Page 1.)

character of the fall weather and the transportation situation. Cars are becoming somewhat more plentiful, and if this improves further, prices may tend downward slightly.

Mill Feeds

Millfeeds are in a rather peculiar position. At current prices which are practically the lowest on bran in many months, it is not safe to manifest extremely bearish views because of the comparatively light production by mills of the country. On the other hand, demand is scant and the outlook is favorable for a sharp increase in the output of bran and shorts, which invites the belief that values must yet recede further. Bran can be bought on the principal milling markets of the West, Minneapolis and Kansas City, around $38 to $39 a ton for spot shipment, with St. Louis quoting around $43, with Philadelphia, Boston and surrounding Eastern markets around $50 to $52 a ton. The Southwestern winter wheat belt is out of line to work the offal to the East, the Northwest sharing the bulk of this business. In this connection, it is interesting to note that large quantities of bran were delivered to speculative handlers of the East by Northwestern jobbers within the past month on so-called season contracts. Early in the crop year there was a large trade in season bran, both buyers and sellers, however, not expecting to complete transactions by actual deliveries. They were merely speculating on their views as to future prices. Delivery of the feed, therefore, was made without an actual consumptive outlet being provided, which has added to the weakness of the trade. Gray shorts are bringing around $56 a ton in Kansas City, $60 to $61 a ton in Minneapolis, $58 to $60 in St. Louis and as high as $70 in the Far East. The heavier offal may be depressed somewhat by the approaching movement of new corn.

Grains

Corn is selling well under $1.50 a bushel on markets of the Middle West, $1.45 being an extreme top for the cash grain in Chicago at the present writing. The Department of Agriculture September report, forecasting a crop of 3,131,000,000 bushels, the largest in history, has increased selling pressure in both the cash and future markets for the coarse grain, but the cool and wet weather, which is retarding maturity of the plant and causing fear of serious frost damage, is an offsetting influence. Despite the record crop, a large percentage in soft corn, which is easily a possibility, would ultimately prove bullish on prices. The December and May deliveries of corn are selling in the future market on a basis which will net the producer hardly more than 85 to 90 cents a bushel for his grain. So far as a comparison with other grains and feedstuffs is concerned, oats are now on the bargain counter, selling between 60 and 67 cents a bushel in the Middle West. The minor cereal will probably hold up rather firmly in price, already being at a sharp discount under the quotations for competitive feeds. Weather conditions before harvest of the corn crop will play a vital part in the fluctuations in that grain.

POLICY APPROVED

I want to commend Pennsylvania Farmer on its proposed policy of emphasizing the business, rather than the production, side of farming. Farm management has been a phase of farming much neglected in the past by farm papers, state and national departments of agriculture, and practical men. Of course it is, first of all, necessary to produce; but to make a profit on what is produced is essential to continued production. We farmers in the past have sold without reference to the cost, have allowed those who had no hand in production to set the price on the stuff we raised; have sold wholesale and bought retail; have produced without considering the demand; have not counted our labor and that of our wives and children in the cost of production; have kept no accounts in short, have practiced such inbusinesslike methods as would drive a city-manufacturing concern into quick bankruptcy. On account of the weather and other uncertain factors, it is probably more difficult to handle the business side of producing and marketing farm products than that of any other industry. At present, farmers are confronted by gluts, inadequate transportation, abominable weather, short and high-priced labor, and high or increasing costs, while on the other hand, farm products are falling generally, and in many cases to a point where the selling price is below the cost. A good many of us are feeling pretty gloomy over the present situation and what may be ahead. Still, things may work out for the best in the end. The worse the situation becomes now, the sooner we will be compelled to organize for our own protection. If farming is to offer any inducements in the future, it must be put on a more certain and more profitable basis. Of course, we must always trust a good deal to chance, but there is no reason why we need let others dictate the prices we are to receive. The individual is helpless, but a good strong organization with the ability to fight, can secure a fair price.—R. L. Scharring-Hausen.

TO DEVELOP BACTERIA

Reports from England indicate that experiments have been resumed with bacterized peat. There were great hopes of this material as a fertilizer about four years ago. Hot house experiments were so successful that the government encouraged extensive field tests. These failed and we heard nothing more about peat until recently. Meantime there has been some research along this line in this country with inconclusive results.

The English experimenters are again reporting successes, but practical men will want to be shown. The importance of bacteria in promoting plant growth is universally recognized. However, the means for increasing their number, and promoting their activity, are imperfectly known. A few of the State experiment stations have given the matter some attention, but the experiment stations are usually too busy with routine work to find time for research. We ought to be better acquainted with bacteria.—The American Fertilizer.

The Pennsylvania farmers expended last year approximately $13,080,553.00 for commercial fertilizer.

Harvest Time — the Real Test of a Truck's Value

IF there's any season of the year when everybody and everything on a farm keeps moving for ten or twelve hours a day, it is harvest time. In the field and on the road every wheel keeps turning to gather crops, to fill elevators, barns and silos, and to get the necessities of life on the way to mill and market.

At this time a good motor truck is almost a necessity. And the Clydesdale has won a warm place among its farmer owners through absolute dependability. It has plenty of power to haul heavy loads in the field or on the roughest country road. It is rugged enough to stand up under severe strains. It is simple enough for the average farm mechanic to keep in "apple pie order." It is economical in every sense of the word, since the Clydesdale Controller saves gas and oil and wear on vital parts. And it is built with the honest desire to give the farmer real value for every dollar it costs.

The merits of the Clydesdale can best be measured by the results it is producing year in and year out for men in widely different lines of business, who judge truck values by the figures on their books.

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AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
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PHILADELPHIA, PA., SEPTEMBER 25, 1920.

VOLUME 48 NUMBER 13

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Can You Borrow Money?

SOME WEEKS ago the Federal Reserve Board made the suggestion to banks that the extension of credit to the producers of the less essential industries should be discouraged. This was in the interest of deflation and with idea of directing money and labor to the more essential industries. Among others, agriculture was to be considered as deserving of continued credit. We would like to have you write us an answer to this question:

"Do farmers in your community find it more difficult to borrow money now than three or four months ago?"

It will require but a few minutes of your time to answer to this question and if enough will write us we believe the information will be of value to all concerned. If money is really "tighter," tell us; or, if farmers can get necessary credit for the purchase of cattle, machinery, or other farm improvements that may be needed, we would like to know that also.

The Apple Crop

MORE THAN HALF of the entire apple crop of the country, it is reported, will be produced in the states east of the Ohio River—Pennsylvania, New York, New Jersey, Delaware, Maryland, Virginia, West Virginia and the New England States. The seven states named will have 14,000,000 of the 33,000,000 barrels estimated in the nation. This is far above the 10-year average and is already having a decided effect upon the market.

In order that growers may realize the largest returns, a few general principles should be adopted.

First, apples should be packed in accordance with the Pennsylvania apple packing law and the rulings of the Bureau of Markets. Every grower should send to the Department of Agriculture, Harrisburg, Pa., for bulletins, Nos. 348, 349 and 350. The law and practice in New York are already well established.

Second, nothing but the best grades specified should be stored or put upon the market. The big Eastern crop coming at a time when there is a small crop in the Northwest offers a splendid opportunity to popularize Eastern apples, but it cannot be done if more honest and up-to-date packing methods are not adopted.

Third, it is possible in most instances to develop a larger home market. Very often an advertisement in the home papers, giving full information about varieties, quality, location, etc., will bring surprising results. Fruit not fit for market may be made into cider and converted into vinegar or sterilized and sealed for home use or for market. Care must be taken that it has not fermented or will not ferment when sold. We want to repeat the caution that apples must be packed in accordance with the law when shipped to market or offered in closed containers. The strict observance of this act will go far to creating a better market for Eastern apples.

A State With No Strikes

AT LEAST one state in the Union can boast of no strikes. The Pennsylvania State Industrial Board, in collecting data from all states so that it may define a strike received the following answer from the Attorney General of North Dakota: "North Dakota has never had any strikes and we have never had any trouble with matters of this kind." This is most flattering because the state is not only purely agricultural in its industries, but the state government is run by farmers.

Grave Milk Situation

THE DAIRYMEN producing milk for New York and vicinity are face to face with a serious market situation. The Milk Dealers Conference Board has served notice that after October 1 no milk will be purchased at any price owing to the present over supply of condensed, evaporated and powdered milk, according to the editor of the Dairymens' League News. The League Directors, realizing that the situation is serious, met and voted to recommend the pooling of all the milk produced by the 85,000 members of the League. This is line with the demand made by the members of the League that every member receive the same price for his milk, no matter to what kind of market his milk is sold. The Association will pool the proceeds and return to each dairyman his equitable share. The League Directors voted to set the price for October at $3.85 for 100 pounds 3 percent milk. At this writing no milk has been sold and it seems now that a large part of it will not be sold. No one can tell now what the outcome will be.

Pennsylvania Should Have a State Fair

FOR A NUMBER of years we have been convinced that the one thing yet needed to put this state on the map agriculturally is a real, well-conducted state fair. Pennsylvania is second to none in its development of other agencies relating to agriculture. It has one of the best organized Departments of Agriculture, a first-class agricultural college, an efficient organization of farm bureaus, and a splendid working organization of Granges and farmers' clubs, a number of large and successful county fairs, to say nothing of the many breeders associations and local co-operative organizations. All this makes it possible, and for the best interests we believe necessary, to build up a state fair such as this state could and should have. We have made a study of other state fairs for a number of years, and have made a careful survey of the situation in this state and are convinced that the time is ripe to start a campaign for the establishment of a Pennsylvania State Fair.

With this thought in mind the editor of Pennsylvania Farmer attended the recent State Fair at Columbus, Ohio—spending three days at that magnificent agricultural exhibit—and returned more than ever convinced of the value of such exhibitions when owned and run by the state in the interest of agriculture. Several leading farmers and a great many interested visitors from this state were also there and we believe it was the unanimous opinion that Pennsylvania should have a state fair conducted on similar lines. We made it a point to interview every Pennsylvanian we saw and failed to find anyone who was not enthusiastic on the subject. We feel sure that if all the farmers of this state could see this annual affair and learn from the tens of thousands of loyal farmer attendants how much they value their state fair, nothing more would be needed to convince our people of the value and and desirability of establishing a good, clean, live state fair.

And that is just what the Ohio State Fair is. It is good because it is purely agricultural and the number and excellence of the exhibits makes a show that can not be equalled by any aggregation of fake, flim-flam, questionable exhibitions. The more than 5,000 head of purebred live stock, the immense and substantial buildings filled with field and orchard products, home productions and equipment, educational exhibits, dairy products, boys and girls' club work and the acres of farm machinery, including everything from a garden hoe to the largest tractors, trucks, threshing machines, ditchers, etc., make a show that is worth going miles to see.

It is clean because there was absolutely no sign of gambling devices, side shows, fakers, or other catch-penny affairs. This rigid policy can be adopted and enforced because the state is behind it financially and there is no inducement on the part of its managers to sell concessions in order to make it a financial success.

It was live because the people of the state take a live interest in their fair. The attendance on the three days the writer was there was 45,000, 82,000 and 94,000 respectively, and it was made up of the best citizens of the state.

These briefly and inadequately stated facts concerning the Ohio Fair are suggestive reasons why Pennsylvania should have a state fair. They have been potent factors in bringing Ohio farmers together and unifying their thought and activities. The Ohio State Fair has been one of the leading educational influences in that state and has aided in its agricultural development and the fair has advertised it until it is known far and wide as one of the leading agricultural states of the Union.

We advocate the establishment of a state fair in Pennsylvania for the following reasons:

First: Because it is a necessary part of the state's equipment for agricultural education. Seeing and comparing is the quickest, most effective and most natural method of learning. Every producer of farm or household products instinctively compares what he or she has at home with the exhibit and, if the exhibit is better, there is an impulse to go home and equal or excel it. No keeper of scrub stock, mongrel chickens or inadequate equipment of any kind can feel fully contented with things as they are after seeing the best.

Second: Pennsylvania needs a state fair to adequately advertise the agriculture of the state. Comparatively few people, even including the farmers themselves, know of the immense value of the agricultural industry of Pennsylvania The chief routes of travel follow the streams and ravines, avoiding the best agricultural sections, except in a few localities, and the conclusion of the traveler is that Pennsylvania's chief glory is in its mines, factories, cities, railroads and natural scenery. The most effective way to correct this erroneous idea and to prove that agriculture is greater than any of these is to establish a state agricultural fair.

Third: A state fair would tend to greatly improve the many already good county fairs. For the reasons stated above, the products in every line would tend to improvement because of the wider opportunity for comparison and this would naturally improve the exhibits and interest in the county fairs. In addition to this it would gradually improve the tone and character of local fairs because of the higher standard set by a properly conducted state fair. This has been the experience in Ohio and other states having state fairs, most of which have also more and better county fairs than does Pennsylvania.

These are some of the reasons we give for urging a state fair. All that is needed to get it is for the people to make the demand upon the legislature, and if the granges, farmers' clubs, farm bureaus will take the matter up it can be done with little effort. We have no ax to grind in the matter, but being an interested educational factor in the agriculture of the state, and having the best interests of the business of farming at heart, we shall continue to use our influence for the establishment of A STATE FAIR IN PENNSYLVANIA.

Our Washington Letter

The extensive use of heavy motor trucks has created new and very serious problems in the construction and maintenance of highways. This has led the Bureau of Public Roads of the United States Department of Agriculture to undertake some highly important testing and research work for the purpose of finding the best road materials and methods of construction to meet present day requirements. These road material tests are being carried on at the Arlington, Va., Experimenting Farm, under the supervision of E. B. Smith, senior assistant testing engineer, and have been under way a year and a half. The results at this time are not conclusive; nevertheless the work has progressed sufficiently to enable the Bureau of Public Roads to reach some definite conclusions which will be given to the public in a bulletin to be issued at an early date.

Tests are being made to determine the durability of various materials in concrete, vetrified brick and stone block pavements. The tests are planned to give sections of pavement of all the different materials the same practical traffic use. A wear testing machine gives approximately the wear produced by heavily loaded steel-tired vehicles. It is described by the engineer in charge as consisting of "five castiron wheels 48 inches in diameter and two inches wide, each weighing 1000 pounds. The wheels are mounted inside of a channel iron frame in such a way that they roll over the center twelve inches of the 24-inch test strip. Each wheel is mounted independently of the others so as to be free to move up and down and thus adjust itself to inequalities and depressions in the pavement along the line over which it travels. The wheels travel six miles per hour." At present these wheels have made upwards of 6000 trips over the test pavement.

Each section of pavement is laid on a concrete base eight inches in depth, under which is a 12-inch subbase of cinders, with a four-inch tile beneath, providing ample drainage.

In the tests some of the materials used have gone down badly. It has been found that the durability of brick depends largely upon its hardness. Hard brick with both cement and asphalt fillers has stood up very good, while less hardened brick is badly cut up. Granite block is apparently more lasting than other materials, but lacks the finished surface. The cement filler gives a smoother surface than the asphalt, after hard wear.

A new series of tests is under way, with solid concrete slabs the width of the roadway. These blocks will rest on a sub-surface which in some of the tests will be water-proofed and in others the subsurface will be protected from water seepage by concrete side walls. In other tests with the solid slab pavement the subsurface is kept water soaked and in others well drained.

A machine for testing these road slabs has been constructed which is designed to produce the impact that might be delivered by a 7½-ton truck. These impacts are made until the slabs are broken. In some instances a few impacts are sufficient to break down a slab on a poorly constructed subsurface, while with a more adequate subsurface many times the number of impacts are necessary to break the slabs.

In actual tests on a concrete road, the indications are that "when a wheel load of 8500 pounds is at rest on an eight-inch concrete slab, laid on a rather wet clay subgrade the fibre stress in tension is only about 34 pounds per square inch directly under the load, and since the modulus of rupture of the ordinary concrete road mixture is well over 400 pounds per square inch, and possibly as high as 600 pounds per square inch, the danger of serious cracking of the concrete under static loads is practically nil except at the corners of the slabs."

The results obtained with a War Department truck loaded with five tons of sand, and having a total weight of 7750 pounds on one rear wheel, showed that the maximum impact pressure when the truck was running fifteen miles per hour and fell through a height of three inches, was 42,000 pounds, and this was 5.4 times the static load pressure executed by the rear wheel. When the rear wheel dropped through a height of only one-fourth inch at fifteen miles per hour, the impact pressure produced was 28,000 pounds, or 3.0 times the static load pressure.

That roads properly constructed of certain road materials found most highly durable, stand up under these severe practical tests, indicate that it is possible to construct highways that will stand the heavy wear of motor truck traffic.

The past summer many farm boys have come to Washington in groups, one of the principal objects of their visits being the inspection of the United States Department of Agriculture activities. California, Texas, and a large number of nearby States have sent their quotas of young farmers on these trips. The boys return to their homes with a broadened vision and a wealth of information which it is evident will result in a more helpful understanding of the relations between the government and its citizens, and the importance of the work being accomplished by the Department of Agriculture for the farmers' benefit and the nation's good.

The Department of Agriculture announces that it has organized a new office, which will be known as the Office of Development, Bureau of Chemistry. It will seek to popularize commercially the discoveries of the department, which are expected to greatly benefit the nation's industries. David J. Price, whose grain explosion investigations have resulted in the saving of vast quantities of foodstuffs, will head this new activity.

HARRISBURG LETTER

Agricultural Laws.—Plans for a general overhauling of the State laws relative to agriculture are being discussed at the Capitol and already studies are being made of the dog license code, the laws relative to fences, protection of live stock, and weeds. Others will receive attention as the sentiment and needs of people find expression at the county fairs and similar places which are being visited by officers of the State Department of Agriculture and folks connected with the State government. In due course of time the State laws will be codified, as has been done in regard to schools, municipalities, highways and the like and which is in contemplation for various other subjects. The general codification of the statutory law of the State would be a godsend to the ordinary man because acts and decisions come so fast few people can keep track of them even at the Capitol. Secretary Fred Rasmussen is at work on a number of features of the dog license code and will discuss that branch of law with the count comissioners at their session at Wilkes-Barre, while he has men at work on the laws relative to fences and weeds so that bills bringing them down to date may be prepared for the next session of the Legislature and get started before the grand rush begins and the preliminary entries for the gubernatorial sweepstakes of 1922 start. The secretary has won a lot of support for his proposal for an adequate weed elimination bill and enough damage has been done this year to make such a measure popular.

More Farm Hands Found.—According to the reports of R. J. Peters, who is in charge of the State Employment agencies, the plan of having a day for farmers and men wishing to work on the farm to meet at the several agencies has worked out very well and he believes it will prove valuable next spring as people get to understand the system. This year half a dozen agencies which were conducted during the war have been re-established and it is idea to open others where agricultural help can be obtained. It is recognized that this year abnormal conditions have prevailed and next year a thorough test can be be undertaken.

Foreigners for Farms.—Some efforts have been made by State authorities to induce persons entering this country from other lands to take up farming preferably as hands, or if they can get the capital, to occupy some of the farms in southern Pennsylvania either standing idle or about to be divided. The State Chamber of Commerce people have launched a movement to get men who have made and saved money in industrial work to try farming in this State instead of in their home countries, while the attention of Italians, Spaniards, Dalmatians and others living in the south of Europe has been called to chances in agriculture on small plots near cities.

Over 200 Miles.—Pennsylvania leads the country in regard to the number of miles of permanent road construction this year, showing a total over 200 miles with Illinois the next competitor sixty miles behind. Of course, this road mileage has cost a sum which in other years would have been screeched at, but this year local demands have led the State to let contracts at high figures. Lately there has been a let up because it is recognized the contractors having work for the State will have trouble enough completing what they have without going into bankruptcy in some instances. The mileage under contract in Pennsylvania is larger than in any other State.

Buying by Car.—From what has been learned in counties in the peach and potato belts of Pennsylvania more people have gone into the country to buy their supplies of fruit or vegetables than ever before and the automobile has enabled buyers to go right to the barn and secure prices which were distinctly favorable. Instances have been heard of where farmers have been able to dispense with going to market on some days because of the manner in which city dwellers rode out into the country to buy.—Hamilton, Sept. 20.

NEW YORK LETTER

Good Price for Calves.—The boys and girls of the Chenango County Calf Club recently sold 45 purebred Holstein Guernsey heifers for $10,800—or an average price of $240 per head.

Milk Troubles.—Eastern dairymen face the biggest test of their organization in history as the dealers refuse to buy any more milk for manufacturing purposes after October 1 at any price. It is feared that they may refuse to take any milk at all. The Dairymen's League has announced a price of $3.85 per 100 pounds of three per cent milk, plus the usual differentials, or 12 cents per cwt. less than cost of production. All proceeds of liquid milk sold will be pooled and those members whose milk would have gone to manufacturers will share in the proceeds pro rata. The manufacturers say they will take no more milk until present stocks are sold.

Apples Lost to Cayuga.—Cayuga County farmers were offered a fine cash price for their entire crop by a New York firm and are unable to accept it because they cannot get containers. They will be forced to sell to cider mills. Apple drying firms are not buying many apples this year.

Draft Horse Notes.—There are 575 entries in the farm and draft horse classes at the State Fair, a great growth since 1908 when no prize money was offered for the heavy breeds. This year the prizes amounted to $1,000, including 75 special and silver prizes valued at $1700. There were very interesting classes in judging draft horses for the benefit of farm boys and girls who were given $700 in prizes. It was shown that there has been an increase in prices of draft horses here of 25 per cent within the year, and that a real shortage of desirable animals exists. Since 1913 over 75 per cent of the draft horse entries at the fair have been made by members of the New York State Draft Horse Breeders' Association.

Farm Policy Needed.—Dean Mann, of the State College of Agriculture, says that farmers need imediate recognition; that any man who says the farmer should leave the farm if he is not satisfied with it is either a fool, an ignoramus or a criminal. If every farmer who was not satisfied left the country would starve. He recommends a policy similar to that carried out by Germany, by means of which that country was able to produce 90 per cent of its food throughout the war. There co-operative societies for farmers are found at their best in regard to efficiency.—M. G. F., Dryden, N. Y.

NEW JERSEY NEWS

Many Peach Trees.—A total of 679,000 bearing peach trees have been found in a survey made of the commercial orchards in New Jersey and 302,000 trees not yet in bearing. Of the non-bearing peach trees, 58,000 will start to bear in 1921; 97,000 in 1922, and 147,000 in 1923. Assuming that about 50,000 trees will be taken out for various reasons during each of the next three years, the total number of bearing trees in the commercial orchards in 1921 should be 687,000; in 1922, 734,000, and in 1923, 831,000, or an increase of between one and two per cent. from 1920 to 1921; six per cent from 1921 to 1922, and thirteen per cent from 1922 to 1923. In the commercial apple orchards, a total of 308,000 bearing trees was found. Over ninety per cent of these trees are between the ages of eight and twenty-five years, showing that the commercial apple industry in this State is comparatively young. In addition, the survey showed 252,000 non-bearing trees. This indicated that by 1928 or 1930 the number of bearing apple trees will have increased to 560,000, or over eighty per cent more than the present number, which means a probable increase in production by that time of about forty per cent more than the present production. These increases in peach and apple plantings do not appear abnormal, and with increased attention paid to proper marketing, there should be no danger of over-production. The bulk of the fruit crop in New Jersey has been for years consumed in a comparatively few large cities. With a proper marketing system, many smaller cities could be supplied.

Exhibits For Fair.—Upwards of $5000 in cash awards will give added impetus to the agricultural and horticultural department at the Trenton Fair from Sept. 27 to Oct. 1. The favorable growing season in New Jersey has brought entries of products that will be truly representative of the position this State occupies as an agricultural State. Unusually generous prizes are offered for exhibits of oats, corn, rye and wheat, while the premium list for the displays of vegetables is more attractive than ever, insuring a colossal and varied exhibition. The schedule of prizes in the horticultural branch has been advanced to a point, which will bring scores of aditional entries. Fruits and flowers will form a display of greater proportions than ever before. Lovers of dogs, poultry and horses will find ample diversion at the exhibition. There will be separate shows to exhibit an array of blue ribbon breeds in each class. Special buildings have been set aside for the staging of both the dog and poultry shows, while the exhibition of horses will take place in the regular horse show building. The entries already tabulated indicate a show of each species, which will set a new standard for shows in the Est. Experts have been placed in charge of the arrangements, and the prize awards which have been enlarged to insure a greater show than ever before, are to be made by competent and unbiased judges. At the head of the poultry show and department is Harvey E. Rogers, of Hamilton Township, in which the fair is held. E. J. Foley, of Philadelphia, recognized as one of the dog experts in the United States, will supervise the special dog show. The latter exhibit will present as large and as varied a group of dogs as has ever featured the afir. An entire building at the fair will be devoted to the exhibition of boys' and girls' clubs in New Jersey. Prof. A. M. Hulbert, of the New Jersey State College, will have charge of these exhibits. It has been claimed by persons interested in the work that much good was accomplished, particularly among the girls, last year, by the canning demonstrations.

Peach Borer Eradication.—Fruit growers in large numbers from Central Jersey points gathered during the week at the Phillips-Lipman Farm at Washington's Crossing along the Delaware north of Trenton, and witnessed with a great degree of interest demonstrations in the use of para-di-chloro benzine in eradicating peach borers.—Kelly, Sept. 18.

An engineer dare not say

"My watch was wrong"

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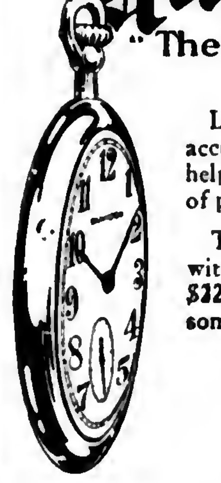

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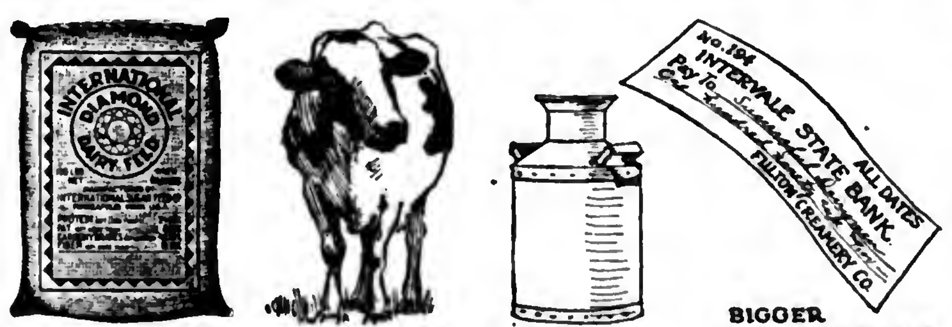


BETTER FEED BETTER COWS MORE MILK BIGGER MILK CHECKS

Keeping Milk Flows Flowing

A Better Feed—International Special Dairy Feed is a scientific blend of the highest grade materials, each one of which contains certain elements necessary to body building and milk making. It is a *better* feed, which finally means Bigger Milk Checks.

Better Cows—The profitably fed cow builds up her body while increasing her milk flow. Her better body allows her to maintain a better milk flow all the year round. The ultimate result is Bigger Milk Checks all the year round.

More Milk—International Special Dairy Feed is guaranteed to produce more milk than any other feed of similar analysis. The result must be

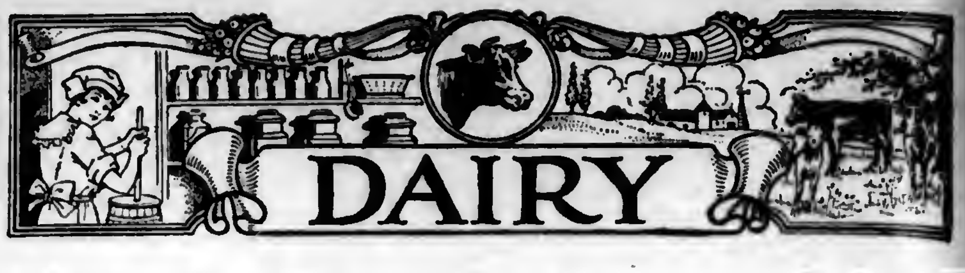
Bigger Milk Checks—These are what count. They represent the sum total of the energy and expenditures you devote to milk production. To get them feed

International Special Dairy Feed

INTERNATIONAL SPECIAL DAIRY FEED
INTERNATIONAL SUGAR FEED Co.

Order a trial ton from your dealer right now. It is guaranteed to make good for you. Have your cows in fine fettle and at tiptop production when pasturage fails. Two extra quarts of milk daily from each cow will make the trial worth while. Write us if there is no International dealer in your town.

INTERNATIONAL SUGAR FEED CO.
MINNEAPOLIS MINNESOTA
Mills at Minneapolis and Memphis
Live Agents Wanted



DAIRY

Marketing Dairy Products in Holland

What Organization has Done for the Dairymen

By L. Dykstra, Vreeland, Holland

Every country, every province, every county; nay every farm in this world has its own special method of marketing farm products.

I have been several years in America, I have visited a good many other countries and have worked in them to earn my daily bread and at present I am in my native home, Holland, but from all that I have seen, there certainly are some business lines that could be generalized all over the world and I believe the little dairying countries—Denmark and Holland—are doing their bit in this regard.

In these little countries the cooperative principles of people and government have taken such a wide flight that cooperation is found in nearly every branch of business.

In 1875 the first fundamentals were already laid for the Herdbook-foundation. The purpose of this was—to improve the average milk yield and the exterior of the cow.

Prof. Borland of State College Instructs the Men and Boys at Grove City Show in Cow Judging

About 1879 the first cooperative creameries were erected with the purpose of producing first quality butter and cheese all over the country. Then these creameries joined again to improve the marketing methods and open new territories for exportation of dairy and farm products.

Only these three things alone are already worth while; encouraging higher production, products of equal quality and doing big business at low expense with help of the Government.

But this has not only relation to the dairy industry here. The grain farmers have also their organizations for cooperative buying and selling, improving seed, economically applying and purchasing of fertilizers, etc. All these things have lowered the production price and increased the quality and export trade to a high degree.

As dairying is the main source of income in the two little mentioned countries, we shall restrict our considerations mainly to this branch.

The time before the cooperation period was so very different from the present time, on every farm that butter and cheese was made, the whey was fed to the hogs, the buttermilk to the calves and in every village there was once or twice a week a market day, and on these market days the farmers came with their butter, cheese, hogs—in short all the farm products.

The market was divided in sections and the purchasers often came from far away. On such a market day, hundreds of farmers sometimes came together each with one or more barrels of butter or cheese, but there were not only hundreds of farmers but also hundreds of qualities of products, for each farmer followed his own method of butter or cheese making, there was also no uniformity in price.

It was remarkable that it often occurred that the products of some farms were disqualified, the soil got blamed for it and if it was not the soil, the cows were the cause or even the farm was considered as bewitched. Very different prices were paid in those days. The same was the case with the grain. Lack of uniformity was the cause that the grain prices also varied.

The changes that have gradually taken place, the cooperative spirit that has seized the mind of most of the farmers, now means that the hundreds of farmers that brought their milk products to the market of the village now stay home, and instead of hundreds of butter and cheese makers, with hundreds of qualities of butter or cheese, now there stands the creamery, with only one or two butter makers and only one quality of butter or cheese. Haunted farms, unfit soils all such is never more head of, the centralization system has absorbed all of them.

Notwithstanding the fact that millions of pounds of butter and cheese of uniform quality are made already, year in and year out, also the Government of Denmark and Holland have taken steps safeguarding the place their butter and cheese have won on foreign markets.

The Danish Government guarantees the quality of the butter by the so-called L U R brand, the Holland Government has the guarantee mark, the R I J K S M E R K, also cheese is marked according to the fat quantity.

Such practices can also be done in other countries, including America. These practices have made it possible that yearly millions of pounds of butter and cheese are placed on foreign markets at good prices.

This spring it is was thought that the markets would be overcrowded with dairy products, now people are crying for more and more, there is a shortage of milk, shortage of cheese, of butter, of meat and this shortage will increase every day.

In fact, up to this day, there is no section in the world where there are too many cows—the opportunities for the dairy and farming business are great, not only in improving the quality of the product or in securing a good market but moreover there are vast opportunities in this branch for securing a paying business. But from what I have seen as well in America as in many places, I feel safe in saying that for the future a standardizing of dairy and farm products as is found in these two little countries will be the most satisfactory business-method.

I know very well that in a vast country as America with so many different branches of farming and dairying, in point of specializing, a standardizing under accepted rules of inspection, grading, selling, etc., is more difficult to apply than when it concerns countries under more uniform business lines, but also in the vast country of America, three things can also be applied as well as any where else, viz: more cooperation—study of the best methods—and the confidence of the consumer in quality.

THE NATIONAL AND STATE DAIRY COUNCILS EXHIBIT

The National and State Dairy Councils will have an unusually large and attractive exhibit at the National Dairy Show this year. It will occupy a room equal in size to that occupied by the Government last year in which was spent $25,000.

The National and State Dairy Councils room will be headquarters for all county agents and home demonstration agents thruout the country. Also headquarters for all organizations desiring to hold meetings at the National Dairy Show. A portion of the large room scheduled for the Dairy Councils will be partitioned off so that between four and six hundred people can find space for holding meetings that they might desire. In addition, picture shows will be held in this room; also the Milk Fairy Play will be staged every afternoon. Milk bars will be in evidence and the most delicious and nutritious drinks ever prepared will be served.

A large attractive display featuring the work of the Dairy Councils will be prepared showing dairy conditions as they now are and dairy conditions as they should be. This will be one of the most unusual exhibits in connection with the entire Dairy Show this year. In addition, Mrs. Ira Couch Woods of the McCormick Memorial Institute will conduct child welfare work and feature her work in conjunction with that of the Chicago city schools in bringing the seriously undernourished and anemic children up to standard by giving them a sufficient supply of milk.

Everybody is invited to visit the National and State Dairy Councils room. There will be rest rooms for those who are tired, and good drinks for those who are thirsty. This will be a real treat for everybody attending the greatest National Dairy Show ever held.

TI-O-GA FEED SERVICE

Converts rough feeds into profit

Every pound of digestible food contained in roughage is worth as much as that which is purchased in concentrated feeds, and the best profit in dairying is obtained by the use of concentrates which will properly combine with the roughage without waste.

Crop Rotation in good farming, requires the growing of different kinds of roughage. You do not want to buy food elements which the roughage contains, but buy in the concentrates only what the roughage lacks and bring the daily ration to the standard required by the cow for maintenance and milk production.

TI-O-GA Feed Service meets these conditions by preparing feeds to form a balanced ration with every variety of roughage: Hay, Dry Corn Fodder, Silage, Pasturage, Green Fodder, etc. Each feed supplements the group of roughage it is intended to be used with and with it forms a balanced ration, making more of the food elements contained in the roughage available.

Red Brand TI-O-GA Dairy Feed
to be fed with low protein succulent roughage: Silage, Pasturage, Green Fodder, etc.

White Brand TI-O-GA Dairy Feed
to be fed with medium protein dry roughage: Timothy Hay, Mixed Hay, Corn Fodder, etc.

Blue Brand TI-O-GA Dairy Feed
to be fed with high protein dry roughage: Clover Hay, Alfalfa, etc.

In each case the cow gets the same amount of nutrition in the same nutritive ratio, and you get more money from your roughage. If your dealer does not have the kind of TI-O-GA Dairy Feed to balance your roughage, advise us and we will arrange for some nearby dealer to supply you.

Our book on *TI-O-GA Feed Service* and explanation of how the three feeds furnish the same results sent free on request.

Tioga Mill & Elevator Co.
Waverly, N. Y.

Use the TI-O-GA Dairy Feed which forms a balanced ration with your own roughage.

The same careful service is furnished through:
- TI-O-GA Brood Sow and Pig Feed.
- TI-O-GA Growing Shoat Feed.
- TI-O-GA Fattening Hog Feed.
- TI-O-GA Chick Feed.
- TI-O-GA Growing Mash.
- TI-O-GA Growing Grains.
- TI-O-GA Laying Food.
- TI-O-GA Poultry Grains.
- TI-O-GA Calf Food.
- TI-O-GA Horse Feed.
- Colonel's Ration (Full Feed for Horses).

THE NEW DE LAVAL CREAM SEPARATORS

in a class by themselves
They are as much superior to other separators as other separators are to gravity setting systems.

The De Laval Separator Co.
New York Chicago San Francisco

FOR SALE
New 12 x 30 two-piece Oregon clear fir Silo (with skeleton roof) made by International Silo Company. Never been put up. Can ship at once. $280.00 will take it.
A. MILLER, SMETHPORT, PA.

WANTED: MAN AND WIFE
with not more than one child, to work on farm. Man to do farm work; wife to take full charge of house and cook for two or three men. House has hot and cold water, with bath, also fully furnished. Good opportunity for right party. Give reference and wages expected in first letter.
Apply PINEY CREEK FARM, NORTH EAST, MD.

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Guaranteed at a Saving of 15 to 50c on the dollar

Finest grade lumber—lowest possible prices: in fact, **wholesale prices**—quickest service. These are made possible for you by Bennett enormous buying power and Bennett famous shipping facilities. In the

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Noontime Comfort at 6:30 A. M.

"It doesn't seem like the same house, Dad, since you put in the new furnace. We were never comfortable 'till noon. It used to be so cold in the morning that I hated to get up.

WARM AIR (UP) COLD AIR (DOWN)

NOVELTY PIPELESS HEATER

"Mother doesn't ask me to put coal on so often, now, and she doesn't have to wear her shawl at breakfast. I heard grandma say yesterday that this is the first Winter she has really felt like herself."

And no wonder—the cause of all this new comfort—of less tinkering about the cellar and of reduced coal bills—is the **NOVELTY** Pipeless Furnace.

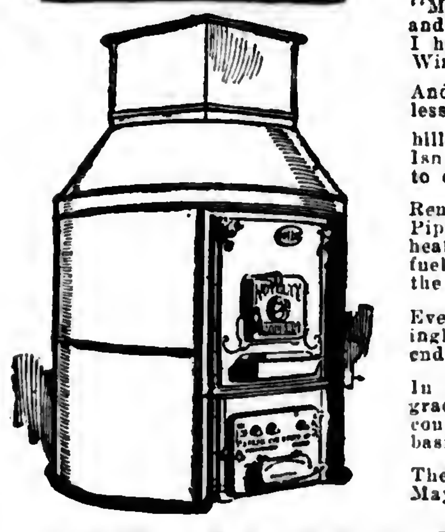
Isn't that just about what you expect your furnace to do?

Remember this. The whole aim of the **NOVELTY** Pipeless is to deliver the greatest possible volume of heat at the least possible expenditure of effort and fuel—and to go on giving that kind of service over the longest possible period.

Every part of the **NOVELTY** Pipeless, however seemingly unimportant that part may be, is built with that end in view.

In fact an organization that has been making high grade heating and cooking apparatus for 73 years could not afford to offer its products on any other basis.

The story is a long one. It is mighty interesting. May we send it to you?



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A Twist of the Wrist—A Flood of Heat
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In two styles: for heating only or, with the new and exclusive in-built mantle, for heating and lighting.

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For heating only, $1.75

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September is the ideal time for planting Evergreens. We have tens of thousands of thrifty specimens ready for immediate shipment. We ball and burlap them *without any extra charge.*

Write today for catalog describing Evergreens for lawns, hedges and windbreaks, also complete line of fruit trees and small fruits.

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Big increase in my factory enables me to make lowest cash offer on a Drag Log Saw. Lever Control to Start or Stop Saw while engine runs, Arm Swing and Force Feed for fast cutting. Poweful 4-cycle engine with speed regulator, 5-ft. saw blade. Complete, ready to operate. $125 F. O. B. Kansas City. $6.80 extra from Pittsburgh, Pa.

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Get My Special Prices now being made on Stationary and Portable Engines—in sizes 2, 3, 4, 6, 8, 12, 16, 22 and 30 H-P. Also, Power Cut-Off Saws for sawing cord wood and pole wood. This $125 Offer on WITTE Drag Log Saws is for immediate acceptance. Don't wait if you want to get in on this big advertising offer. You know if it's a WITTE, it's all right. Quick shipment, have your banker wire order, or mail order today and Save $50. Address your nearest shipping point.

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2045 Oakland Ave., KANSAS CITY, MO.
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WANTED A number of good men who wish to learn trade at good wages and have permanent employment. Address
BUCKWALTER STOVE CO.,
Royersford, Pa.

HORTICULTURE

NEW YORK APPLE GROWERS ALARMED

New York apple growers stand in a position where they want more light on the processes of movement from the orchards to the consumers' tables. They feel that they have been left out of the steps following the fruit as it left their hands while the buyers and big dealers have had comprehensive means of knowing accurately the cost of production, together with all profits accruing to the growers in connection with the industry. The growers have not had this advantage and generally, so far as the buyers were concerned, this part of the business has been a closed book to the orchardists.

The upshot of these feelings is that growers from different parts of the state have entered complaint with the public markets commission of New York City protesting that while in a retail way apples sell for fancy prices in the metropolis the dealers have so far offered prices hardly more than sufficient to take care of the harvesting and packing work. It is with fears that the fruit industry of the state may become imperiled by this alleged attitude of the dealers that this protest is made.

HILLING CELERY

The protest was forwarded in the form of a telegram to Commissioner of Public Markets, Edwin J. O'Malley and was signed by Frank M. Bradley, president and Seth J. T. Bush, secretary of the New York State Federation of Agriculture. The telegram reads as follows:

"Farmers of New York state have 40,000 carloads of apples to sell, the finest ever grown. Approximately 1,000 cars are ready to ship now. The price offered the grower, only one cent a pound or $1.50 a barrel, will not pay picking expenses. Do your people in New York want any of this fruit? Unless something can be done to increase the demand and thereby secure for the grower a market for his fruit and price that will cover cost of production, there will probably be a couple of million bushels of fruit wasted in this state.

"A remedy must be found for a condition which gives the producer one cent and charges the consumer 5 cents. We also have pears, plums and peaches. Can your Department of Markets stimulate the demand for fruit by giving the people of New York City the facts?"

The present estimate is that New York state will produce nearly one-fifth of all the apples grown in the country this season. The New York City receipts are nearly one thousand cars in excess of one year ago at this time. In spite of a seemingly ample supply on the city markets it is said that apples costing the dealer one and two-thirds cents per pound were sold in the stalls recently at 15c a pound. It is understood that the price has since dropped to around ten cents a pound. However, the growers feel that if at the distributing end any such prices are warranted it is high time that the producer received a living return for his major part in the work of production.

A partial defense of the dealers was offered by Peter J. Alnor, president of the New York Retail Grocers' Association, who said that most of the state crop is sold for cooking purposes, while for eating purposes the dealers prefer the western fruit. The western fruit is handled on a margin of about one cent an apple, he said.

The improvement in the pack of New York state fruit has been a real advance during the last few years, yet much remains to be done. However, the growers deem it a very unjust settlement on the 1920 crop to broadcast thruout the fruit belt a pessimistic tone on the part of buyers and organize a concerted movement for the taking over of the crop at prices close to cost of production.

The New York state pack of apples will continue to improve from year to year as the growers continue to apply new methods. The improvement has been steady and continuous in seasons both of good and small profits. But if the dealers are so anxious for the improved pack about which they say so much it is time a sufficient margain was allowed the grower to provide for the standardization.—A. H. P., Wayne Co., N. Y.

DOING HIS BIT

"You are charged with bigamy."

"I guess I'm guilty, your honor."

"Well, sir?"

"I'm a victim of war statistics, your honor."

"What do you mean?"

"I read some figures to show that because of the number of men killed in the war there are now six women to every man, and I tried to get my six."

Whether the moon has any effect on farming has nothing to do with the fact that potatoes should be dug on a clear day when the soil is fairly dry.

A glass of milk a day helps to keep old age away.

STONE FRUIT SHOULD NOT BE SET IN THE FALL

Of all fruit trees only apples should be planted in the fall, and even with the apple spring planting is equally satisfactory.

Cherry and peach trees planted in the fall are quite likely to be killed, or injured by winter freezing.

Trees set in the fall do not have a chance to become established and hence are much more liable to winter injury than trees that have passed thru one growing season.

It is also pointed out that there is not much advantage in fall planting over spring planting, for the trees may be heeled in a nursery row and kept in good shape during winter time.

Some orchard growers use dynamite to blast out the holes for trees. This is regarded as especially desirable only in soils underlaid with an impervious hardpan or those in which their compactness makes digging slow and difficult. The dynamite should be used only when the ground is dry. When the soil is filled with water the explosion of the dynamite forms a jug-shaped cavity about the size of a barrel in which the soil is very loose.

When the trees is planted the settling of the loose soil allows the trees to drop considerably deeper than they should be set.

TRENCHING CELERY

To keep it for Christmas and winter use, I dig a trench in a well-drained portion of my garden. This trench is about six inches wide and as deep as the celery is high. I take up the plants and set them in this trench closely with their roots on the bottom of the trench and the tips extending to the level of the ground. Over this I put boards and cover the entire arrangemtnt with soil and leaves to a depth of six or eight inches. No earth is pressed against the plants. They are simply in a cold chamber with the ground frozen on either side and the mass of a frozen earth above. The result is crisp, tender, perfectly blanched celery with the mercury down to zero. We generally use ours by the first of January so cannot say how much longer it will keep in this way during bitter cold weather. Ours was not frozen and was delicious. There is really [illegible] reason why anyone with a garden should deny himself this vegetable.—M. R. C.

LEADING APPLE VARIETIES IN PENNSYLVANIA

Five hundred and twenty-one commercial apple growers in Pennsylvania report to the Pennsylvania Department of Agriculture their leading varieties as follows:

155	Stayman's Winesap.
132	York Imperial.
122	Baldwin.
34	Northern Spy.
15	Ben Davis.
11	Jonathan.
9	Rome Beauty.
9	Smoke House.
7	King.
7	Stark.
7	Greening.
7	Grimes Golden.
6	Delicious.
521	

Three hundred and thirty-seven commercial peach growers in Pennsylvania report their leading variety as follows:

270	Elberta.
30	Belle of Georgia.
16	Carmen.
11	Champion.
6	Hale.
4	Crawford.
337	

GET MORE CROPS
CALCITE BRAND
MICHIGAN LIMESTONE
OVER 99% PURE

Look at the price of hay!
Look at the cost of clover seed!
Then ask yourself the question—
"*Can I afford to seed to clover without first applying*
Michigan Pulverized Limestone
(Carbonate of Lime)
It is the best insurance against loss of seeding
Buy Michigan Limestone this Fall — WHY?

Because
- You are sure of getting it.
- Shipping conditions are better.
- Hauling conditions are better.
- Labor conditions are better.
- You can apply it to Fall plowed ground any time—the earlier the better.
- Prices may be advanced later.
- When you unload a car of Michigan Limestone, you have an empty box car in which you may be able to ship hay or potatoes.

Michigan Agricultural Limestone is a soft, pure Carbonate of Lime, finely pulverized and easily soluble in your soil. It is ALL available during one rotation and gives you Results on the First Crop, as well as on the succeeding crops of your rotation. It is the cheapest, most convenient and most efficient means of Liming your Soil.

Guaranteed over 99% pure carbonate

MICHIGAN LIMESTONE & CHEMICAL CO.
BUFFALO, N. Y.

Largest Agricultural Limestone Mill in the country. Capacity 1800 tons per day

STAR
Potato Digger
$150.00

It will pay you to write for special circular on this labor and potato saving Digger. Ask your Dealer

Rawlings Implement Co.
11 W. Pratt St., Baltimore, Md.

Warranted to Give Satisfaction
Gombault's
Caustic Balsam

Has Imitators But No Competitors

A Safe, Speedy, Positive Remedy for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs and Lameness from Spavin, Ringbone and other bony tumors. Cures skin diseases or Parasites, Thrush, Diptheria. Removes Bunches from Horses or Cattle.

As a Human Liniment and Antiseptic for external use it is invaluable.

Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price $1.75 per bottle. Sold by druggists, or sent by parcel post, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.

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LIME, PHOSPHATE and FERTILIZER DISTRIBUTOR
SPREADS WET or DAMP LIME ROCK

30 Days Free Trial

If the Holden does not do all we claim, return it.

Increase your crops by spreading. Get a hardier, more certain stand. Put life back into the soil. Save labor and time and make bigger profits by using this lime phosphate and fertilizer distributor.

(Write for trial offer and for folder)

Tells everything. Holden spreads 16 feet wide. Handles wet and damp limerock. Passes egg size rocks. Attaches to any wagon in 3 minutes. No heavy lifting. Light draft. Find out all about it. Write.

The HOLDEN CO., Inc.
Dept. 31 Peoria, Ill.

SPREADS 16½ FT. WIDE

FARQUHAR CIDER PRESS

This Hydraulic Press will work up your apple cull into profitable cider. You can also make money pressing for your neighbors.

Our high pressure construction gets all the juice with minimum power and operating expense. Sizes 15 to 400 barrels a day, suitable for individual and merchant service.

Illustrated Catalog free on request.

A. B. Farquhar Co. Ltd., Box 146, York, Pa.

We also make Engines and Boilers, Sawmills, Threshers, Implements, etc. Write for descriptions.

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TAPES
FOR TYING
CELERY
ASPARAGUS
IN FAST COLORS
Hoffman-Corr Tape Mfg. Co.
312 Market Street, Philadelphia.

Reading Bone Fertilizer
Quality Service Satisfaction

Feeding the World:—The American farmer's job. To do your utmost the land should be fed too. Stick to the old dependable when it comes to feeding the land—Reading Bone Fertilizer.

(This trade mark means quality)

Reading Bone Fertilizer Co., Reading, Pa.

Ask your dealer for Reading Bone Fertilizer.

READING BONE FERTILIZER CO.

Write for booklet and further information.

MANURE
HIGH-GRADE NEW YORK STABLE MANURE
Carload shipments on Pennsylvania and Reading Railroads.
Acme Stable Manure Co.
PHILADELPHIA OFFICE, 1918 MARKET STREET

PAINT
BARN PAINT
$1.35 PER GALLON
Get Factory Prices on All Paints. We Guarantee Quality. We Pay the Freight.
FRANKLIN COLOR WORKS, DEPT. P.
Franklin, Ind.

HAY
W. D. POWER & CO., 601 W. 33 St., New York are the largest handlers of commission hay in greater New York; if you have hay to dispose of communicate with them.
HAY

CROCHETED GRAPE LEAF COLLAR

The motifs are made separately, then joined with needle and thread.

Two balls of No. 20 mercerized crochet cotton are required. There are six clusters of grapes, two grapes at the bottom of each cluster, with stem between them, then a row of three grapes, then two, then one to complete the tip of the cluster.

Make 36 grape motifs to go around the neck, 86 motifs in all. There are five leaves and eleven stems (one stem for each grape cluster and leaf). Ends of threads are concealed by fastening down on the back of the motifs with needle and thread.

Baste the motifs on a pattern of stiff cloth, join together, and fill in with spider webs to hold them in place.

For the webs start the thread at one side of the space, cross the space, Fasten, and proceed in this way unthru work so that thread will not show, and again cross the space. Put in as many threads as are needed to fill the space. Then fasten, and twist out to the edge of the space. Fosten, and proceed in this way until all the spaces are filled.

To Make the Grapes

Hold the end of the thread toward you, make a loop around the left forefinger. On the end of the thread next to the loop, make nine double crochet (dc). Join the last dc to the first with a slip stitch, then pull the end of thread until the ring is tight.

Now chain (ch) 1, dc 1 in first stitch, then dc 2 in each of next stitches all around. Join, make another row the same way, and fasten, always taking up both loops of stitches.

To Make the Leaves

There are three large and two small sections to each leaf. Begin each of the large sections with: Ch 15, miss 1, dc 1 in each of 13 stitches; dc 3 in end stitch; dc 1 in each of 13 stitches back on the other side of ch. * Ch 2, turn; miss 1, dc 1 in each of 13 dc, taking up the back loop of the stitch to form a rib; dc 3 in second of three widening dc; dc 1 in each of 13 dc, turn. Repeat from * three times; fasten. Repeat until there are four points on each side of the center. Join the sections at the sides.

For the small sections: Ch 10, miss 1; dc 1 in each of 8 stitches, dc 3 in end stitch; dc 8 down the other side, always working in the back loop of the stitch. Repeat until there are five points around the section.

To Make the Stems

Ch 10, turn, miss 1; dc 1 in each of 8 dc, 3 dc in end stitch; dc in each stitch on other side, fasten.—Mrs. Cora B. Williams.

PRETTY GOOD PICKLES

Watermelon Pickle

Peel 10 lb. of rind and cut it into desired shapes and sizezs, boil until tender, and drain well.

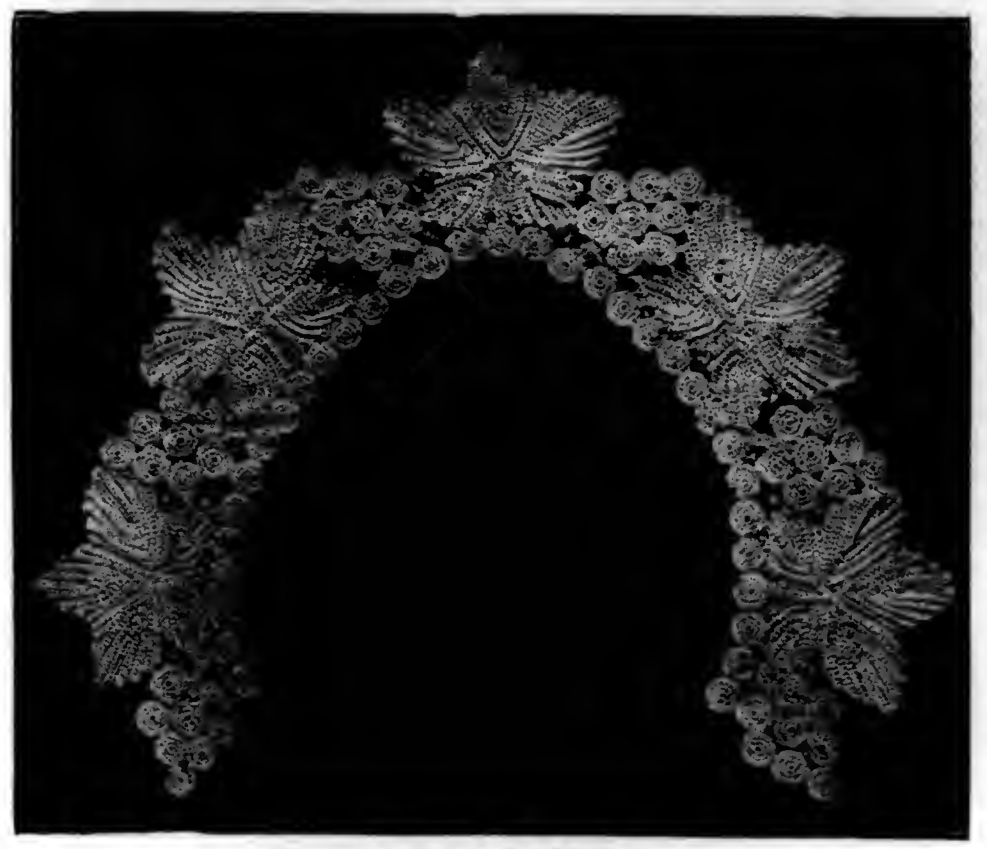
Make a syrup of 3 lb. sugar, 1 pint vinegar, ½ ounce cloves and 1 ounce cinnamon. Pour this syrup scalding hot over the watermelon, let it stand on them 24 hours, then drain off, reheat and pour onto the rinds again. Repeat this operation three times; the third time lay the rinds in sterilized jars, pour on them the syrup and seal tightly.—Helen Lyman.

Cantaloupe Preserves

For these use melons that are not too ripe. Peel off all the hard skin. For each medium-size melon allow 1 cup sugar and two thin slices of lemon, peel and all, a few cloves and a small piece of ginger root. Tie the spices in a thin cloth.

Put the melon, with the sugar and lemon and the spices over a slow fire, add 1 cup of water for each cup of sugar used, and simmer until the melon is tender, then put into jars, and seal.

Watermelon rinds are also good preserved in this syrup. And if you wish to make a sweet pickle, add ½ cup vinegar per ever 2 cups of water used in the liquid.


Crocheted Grape Leaf Collar

Dill Pickles

Wash 50 or 100 medium-size cucumbers clean. Put a layer of salt in a crock, then, a layer of grape leaves, then pack in tightly a layer of cucumbers, sprinkle with salt, put in 2 or 3 whole peppercorns, and a sprinkling of dill seed.

Repeat until all your cucumbers are used. Have the top layer of dill seed, grape leaves and a few slices of rye bread. A few cherry leaves or grapevines tendrils will vary the flavor. Cover with cold water, weight down with a plate and a stone, tie on a paper, and let stand for 10 days, when the pickles will be ready to use.

Sliced Cucumbers Pickles

Peel and slice a gallon of cucumbers, let stand in salt water a few hours. Drain and add the following mixture:

One quart vinegar (not too strong) 2 tablespoons ground mustard, two tablespoons celery seed, ¼ teaspoon turmeric, ⅔ cup white sugar. Let all come barely to boiling, then can the same as for fruit. Much of the fine crispness will be lost if they boil too long.

Ice Water Pickles

These are so-called because the cakes are chilled in ice water for two hours after they are scrubbed clean.

The Proportions.—Per 36 cucumbers of medium size, allow 1 bunch of celery, 3 onions, 2 quarts vinegar, 1 cup brown sugar, and 1 cup salt.

Wash the celery and cucumbers thoroly with a vegetable brush, and chill both in ice water two hours. Have your cans and covers thoroly sterilized. Slice a few pieces of onion into each can. Quarter the cucumbers, and arrange them lengthwise in the cans, put in a few stalks of the celery and 1 tablespoon of mustard seed.

If the vinegar is very strong, dilute it about one-third, add the salt and sugar, and bring the vinegar to just the boiling point. Cool and pour over the cucumbers in the cans and seal. You can put a little piece of horseradish in each jar if you like the flavor.

Should you wish to have these pickles ready to use in a short time, pour the hot vinegar onto them.

Spiced Peaches

Per 6 lb. peaches allow 3 lb. sugar, 1 pint vinegar, 2 cloves per each peach, 1 ounce stick cinnamon.

Put the sugar and cinnamon (the latter tied in a cloth) into the vinegar, and boil it 5 minutes. Then put the peaches, with 2 cloves stuck in each peach, into the boiling vinegar and cook until they are tender, and seal in cans at once.

Pickled Plums and Pears

For 9 lb. of the fruit allow: 6 lb. sugar, 2 quarts of vinegar, and 1 ounce of stick cinnamon.

Boil the vinegar and the spice together (with the cinnamon in a thin cloth). Have the fruit in a crock, and pour the boiling vinegar over it. Let stand 24 hours. Next morning drain off the vinegar, boil it up again, and again pour onto the fruit. Do this three more mornings, the last time boiling the fruit in the vinegar for 10 minutes, put into sterilized cans while boiling hot, and seal. This is also a good way for peaches.—The Editor.

Cucumber Mustard Pickles

One quart small cucumbers, one quart small onions, 1 quart green tomatoes, 2 teaspoons, cayenne pepper.

Put all in weak brine and let stand for 24 hours. Drain out, then scald in equal quantities of vinegar and water. Then pour over them the following dressing: Mix well together 6 tablespoons mustard, 1 tablespoon turmeric, 1½ cups sugar, 1 cup flour, 1½ cups vinegar, 1 cup mustard seed. Stir into these dry ingredients 2 quarts of boiling hot vinegar; the resulting mixture should be a little thicker than cream or about as thick as a medium salad dressing. Pour it over the pickles in the cans, and seal.—Helen Lyman, Mass.

Green Tomatoes Pickles

One-half peck green tomatoes, 8 large onions, 6 sweet peppers, (3 green and 3 red.)

Slice the vegetables, sprinkle with a scant cup of salt, and let stand over night. In the morning drain, and put into a kettle, add 1 pint vinegar, and 1 quart water. Boil 15 minutes, drain again, add 1 quart vinegar, 1 lb. sugar, 1 ounce white mustard seed, ½ ounce celery seed, and a few cloves. Boil ½ hour, pour into cans and seal.—Mrs. F. W. Stillman, N. J.

POINTERS FOR HOUSEWIVES

If that handsome new silk which you have spent precious days in making up, spots with every drop of water, wring a cloth from hot water, lay evenly on the wrong side of the dress and press as dry as possible with a medium hot iron. Go over the whole dress, and your troubles will be over.

Large holes will always be found in Johnny's stockings. It is a result of Johnny's nature. His mother expects it, but if she is wise she will use black mosquito netting as a strong foundation to darn over when attacking those particular holes.

A plain yard without flowers is like dinner without the fixings. It suffices but does not satisfy.

How about that high stool in the kitchen?

Screw top glass salad dressing jars are capital containers for spices, because you can see when they get low. —N. J. Agric. College.

Fall planted peonies generally do better than those started in the spring.

All greens should be blanched for five minutes to reduce bulk; but blanching is not necessary in canning other vegetables.

Ten pounds of steam pressure guarantees safety in canning vegetables and meat. A pressure cooker pays in the long run.

It is said that about four-fifths of all the poultry products in the country are the result of work of women.

When you get that hankering for homemade candy and decide to "try your luck," here's a good thing to remember: If the crystals which form on the sides of the pan are washed down with a fork or skewer covered with several thicknesses of soft cloth dipped in hot water, the candy is not so likely to be grainy.

HOW ONE COUNTRY GIRL ENTERTAINED

A young girl friend of mine who lived with her parents and two brothers in an old-fashioned homestead out in the country, several miles from the trolley line, attended school in the nearby city, and was frequently entertained there over week ends. As a result, at the end of the school year she was under obligations to a number of her city friends, and was at first at a loss to know how to return the good times that they had given her.

But instead of shirking her social obligations or lamenting because she could not entertain in the way that she had been entertained, she set her brains to thinking out the problem along original lines. "An old homestead supper party" was what her invitations said, when she had thought it out.

Twenty of her young friends and two chaperones, who arrived according to schedule at the little country station, were met by Emily and her "coach and four," which was a wagon piled with hay. Then came the fun of getting the "awkward squad" aboard, and laughter bubbled afresh every time the huge mound on wheels heaved or swayed all the way along that country road to the old homestead. Arriving at the gate and sliding off, the guests were just like so many colts turned out to pasture.

The supper was served in the orchard, just at the left of the house, under a wide-preading old apple tree, from whose branches jack-o'-lanterns hung in profusion. Supper was announced by the tooting of a foot-ball horn by the younger brother. The centerpiece was a huge green watering pot filled with outstretched stalks of gay-colored hollyhocks. All around the white cloth covering the long table were scattered up-turned corollas of the hollyhocks. Laying crosswise at each end of the table was an uncut watermelon, that old Mother Nature had artistically striped in dark and light green.

The plates were paper ones, and on each was a sheet of oiled paper. At the left of each plate was a rose-geranium leaf, on which lay a polished green apple, cored, and with a paper napkin with pink border, folded like a fan, sticking out of the core space at the top of the apple.

The supper was served picnic fashion. It consisted of sliced, chicken, boiled beef tongue, Saratoga chips, hard-boiled eggs, pickles, lettuce sandwiches, buttered biscuits, cake and iced lemonade. The hard-boiled eggs were passed in basket, just as if they had been freshly gathered, and the guests laid them on beds of lettuce beside their plates and dressed them with mayonnaise passed around. The lemonade was served by Emily's older brother from a pail which he carried around ladling it out to the guests with a dipper. At this juncture the guests began to sing "The old oaken bucket." One song led to another, and along with the singing went the recounting of school jokes, etc.

The cutting and serving of the watermelons inaugurated a lively guessing contest over the number of seeds, and the prize given to the winner was a child's set of garden implements, which caused much merriment.

The jolly meal finished, the lanterns were lighted all over the lawn, and all the outdoor games of days gone by were indulged in—"drop the handkerchief," "blind man's buff," "ring around rosy," and innumerable others. And when at a late hour, with the silvery moon shedding a halo of glory everywhere, the young folks were jostled back to the trolley station, all declared it the most wonderful party they had ever attended.

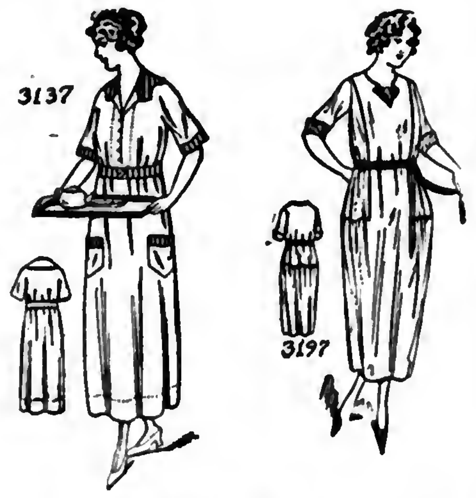
How much wiser, when we country folks entertain city friends, not to try to copy city parties, but to entertain in country fashion and give our guests a really novel time.—Mrs. Escoe Ervin.

PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

3137.—A Practical Apron Dress.—Cut in 4 sizes: Small, 32-32; Medium, 36-38; Large, 40-42 and Extra Large, 44-46 bust measure.

For medium size 4⅞ yards of 36-inch material will be required. Pattern 10 cents.



3197.—Misses' Dress. Cut in 3 sizes: 16, 18 and 20 years. An 18-year size will require 4¼ yards of 44-inch material. Pattern 10 cents.

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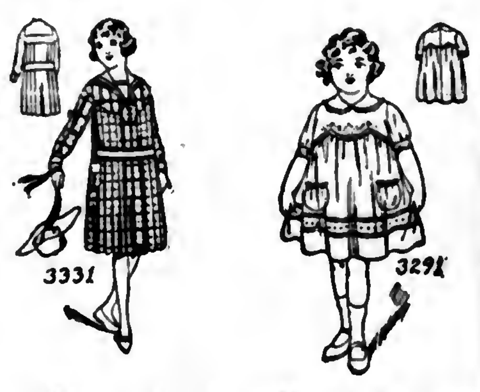

3291.—Child's Dress. Cut in four sizes: 2, 4, 6 and 8 years. A 4-year-size will require 2⅜ yards of 36-inch material. Pattern 10 cents.

A paste for polishing nickelware which is as easily made as it is effective is a mixture of lard and whiting.

If the washing machine wears out, it's not impossible to buy a new one, while mother's back is hard to replace.

A few yards of mosquito netting spread over the baby's bed may mean the difference between comfort and discomfort, health and illness.

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The plant is easy to instal and requires no expert attention. In fact, it needs very little looking after of any sort. Takes up no more room than a couple of apple barrels and operates only when gas is actually being used for cooking and lighting. Between times it doesn't cost a penny.

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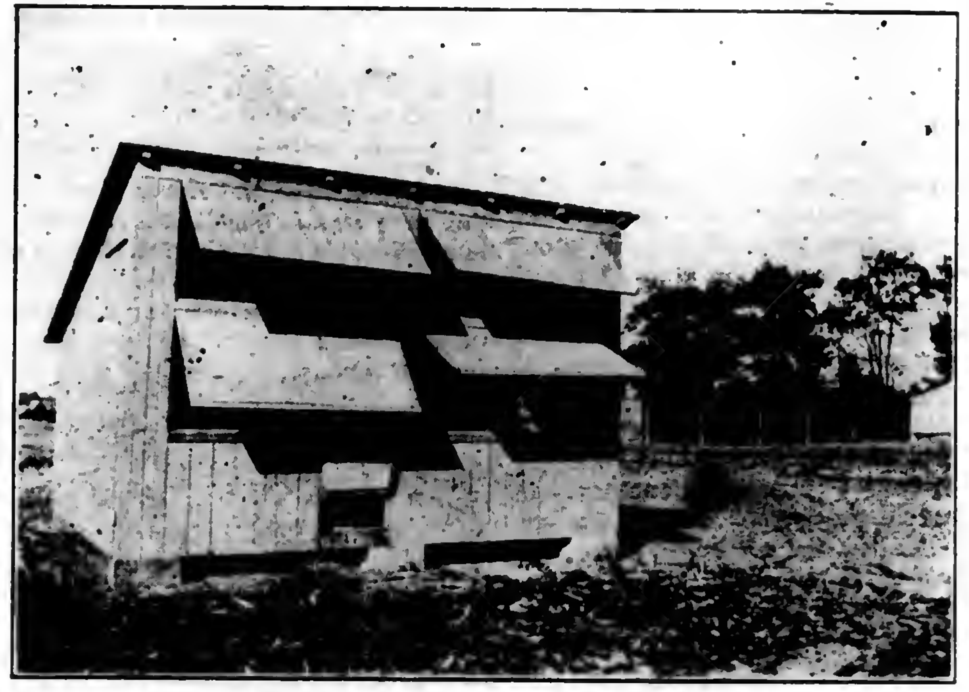
POULTRY

NEW YORK CERTIFIES FARM FLOCKS

Poultrymen of New York State are showing keen interest in the methods of eliminating the boarder hens, as demonstrated by the State College of Agriculture at Ithaca. These demonstrations are arranged in the different counties thru the Farm Bureaus' and are attended by a representative of the Poultry Department who stages the demonstration. The county organization co-operates with the college in the expense of these meetings.

To show the keen interest in this work, demonstrations recently held in Wayne County ran as high in attendance as 50. The average attendance of meetings just completed in Cayuga County averaged 19 and nearly ten thousand birds will be among those selected by the poultrymen of Cayuga County, in order to eliminate the non-layers.



Colony Houses Suited to Coal Brooder

Previous to the demonstration each poultryman on whose farm the demonstration was held, was asked to keep an egg record of the flock a week previous and a week after the flock was culled. In all instances where from 10 to 40 percent of the flock was culled out, the egg yield was not decreased.

There are several extension men representing the college in this work. Among them is Prof. L. M. Hurd who conducted the demonstrations in Cayuga County. At these demonstrations he showed the poultry men typical examples of layers and non-layers. In bringing out the points necessary for a good layer, he said: "The business hen does not have the dressed-up society appearance. She is dirty and shows she has been busy laying eggs. Her shanks are white if she is a Leghorn, as is her beak, which shows she is putting the fat into the eggs rather than into her body. The good hen moults late. Her body has the appearance of vigor. Her toe nails are usually short showing she has been working for her living. The good hens are the last to bed and earliest to rise, and therefore roost on the front perches. Perhaps the most common method used by poultry men in determining a layer is that the pelves bones are well spread and pliable; not contracted and giving the pinched appearance."

These were a few of the main points as brought up by Prof. Hurd. With the high price of feed, such demonstrations are very worth while.

Poultry Certification

Following up the Poultry Selection work, the State College has recently put into operation the certification of farm flocks in the state, which in a measure is comparable to the advanced registry of cattle, in that it distinguishes the high producing birds and attempts to record and register them. This is an endeavor to make available the eggs from the high producing fowls of the state.

Requests for this certification work are filed with the college and an expert inspects the flock with great care. The work is done during the months of October and November. At this time of the year only the good hens are laying unless they have moulted early. An expert can tell if this is the case by looking at the wings. The charge to the poultryman is $5 for a flock containing from 100 to 250 birds and two cents for each additional bird above this number.

Usually the requests for certification within a county is grouped by the Farm Bureau Manager and an inspector completes the work in one in a single trip. Aside from sending an expert to cull the flocks, the Poultry Department furnishes the leg bands and record forms at cost. The leg bands are of a special type and are sealed on each bird by the expert. The record sheets are kept by the Poultry Department in file at Ithaca and are open to the public for inspection. Each owner has a duplicate record.

In December a list of all flocks that have been certified will be published. Certification expires on October 1st of each year and a flock must be re-certified and re-banded in order to be certified. This type of work is meeting with favor among the poultrymen of the state and it bids fair to increase the profitableness of the poultry business by helping the poultrymen get better breeding stock of high producing qualities.—E. C. Weatherby.

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Contains Carbonate of Lime Ammonia and Phosphoric Acid
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FOR ALL CROPS
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A WORD ABOUT ROOFING MATERIALS

So far as materials are concerned one has to count the cost of roof boards first and add that to the roofing. Then the labor cost must be figured in. Right now it costs us $6.50 a square for roof boards that will hold a composition roofing and the material costs $4.50 a roll. Galvanized roofing sells for about $9.00. The labor saved is big as the sheets are usually 2 feet wide and may be laid quickly. They also take less nailing. Wood shingles are quoted today at $9.50 a square in the 18-inch lengths. That makes a roof with the boards cost $12 or $13 a square.

My experience with composition roofing in the rolls is that it must be laid on a tight roof board. Matched lumber or shiplap is the only safe thing or roofing boards laid absolutely tight, otherwise wind will blow it loose or crack it when it is of the best quality and none but the best is worth buying.

For sheds, or any building outside of a residence where appearances count, the galvanized sheets seem to me to be the most satisfactory. I built a tool shed 36 x 22 last year entirely of this material—siding and roof—and am well pleased so far. Galvanized roofing laid 15 years ago on the home farm is still as good as ever so far as wearing is concerned I. tention whatever and seems to have no limit to wear.

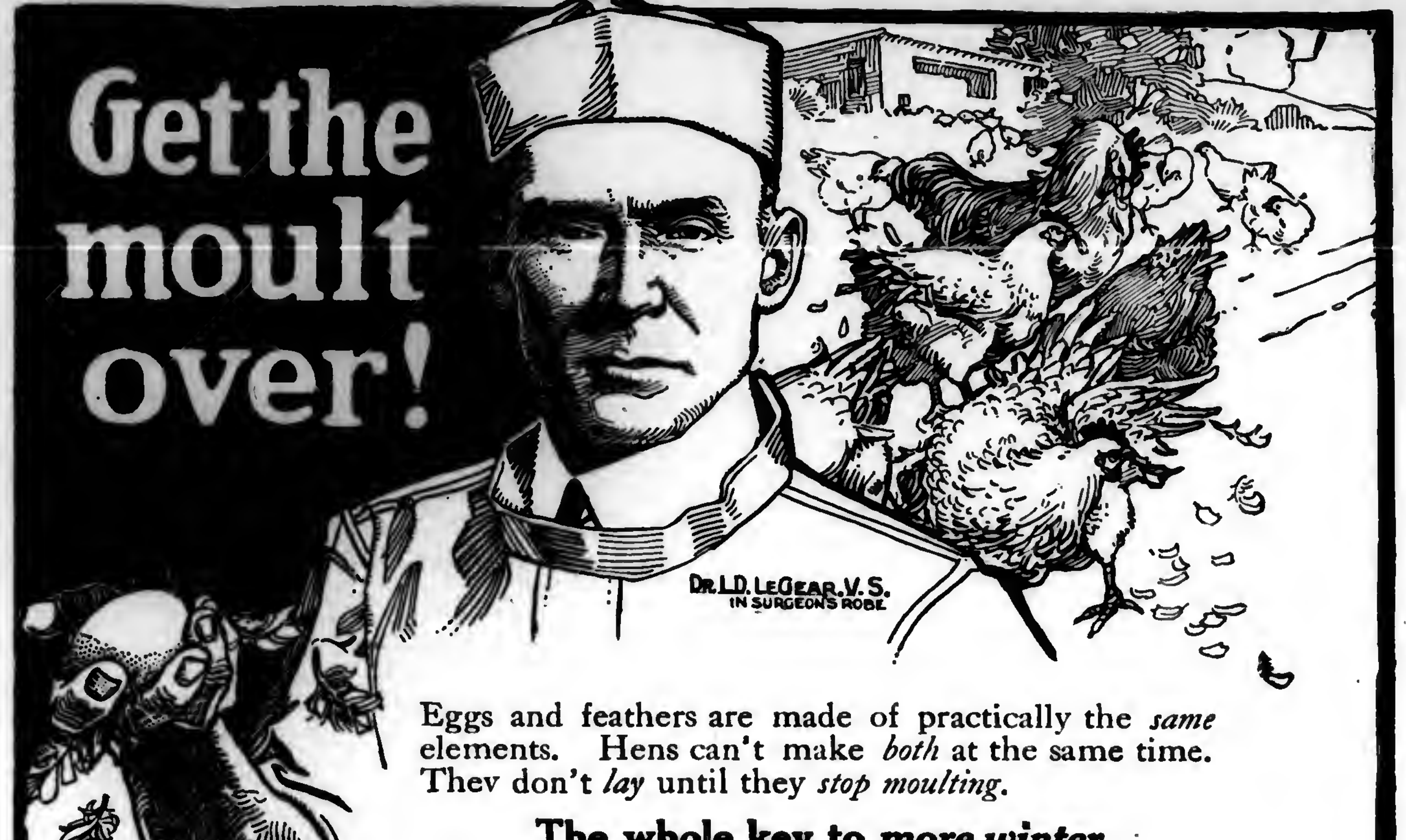
I have individual shingles of the composition sort ordered for the farm house. I like the looks of them. But so far as wearing is concedned I rather expect the galvanized would be better and cheaper. But one wants something with a certain color for a residence roof.

In conclusion there is one thing sure and that is a roof is the cheapest that is the best. We farmers, except in a few cases, must figure our building investment at so much a year rather than by the first cost. A roof that costs 50 percent more at first and lasts twice or 3 times as long is cheaper in the end. This is the way I have come to look at it. One sometimes is short of ready cash for a good permanent job of roofing. In that case it is better to do part of it right or borrow enough to do it properly on the whole job. That looks like sound farm building advice in any line and especially so in roofing.—Earl Rogers, Ohio.

GRADING LAW TO BE ENFORCED

A survey of the peach orchards of Pennsylvania similar in scope to that launched to ascertain the situation in regard to the apple raising industry this summer, will be started within a week by Secretary of Agriculture Fred Rasmusssen. Numerous reports of peach yellows have come here and the men in charge will hunt especially for that disease as the men making the potato survey are looking for signs of the wart disease. Ultimately State peach orchard inspection will come.

Enforcement of the state apple packing law, passed last session with the strong support of the apple growers, is to be started by State Agricultural authorities within the next week or so. The state inspectors will go first to the orchards and observe the packing and grading and then visit the wholesalers. The marking requirements will be enforced.


Get the moult over!
Dr. L. D. LeGear, V. S.
IN SURGEON'S ROBE

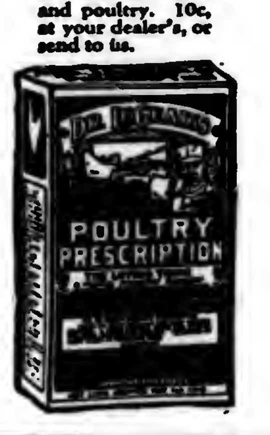
Eggs and feathers are made of practically the *same* elements. Hens can't make *both* at the same time. Thev don't *lay* until they *stop moulting*.

The whole key to *more winter eggs* is in your hands now.

Don't let your hens *drag* through the moult without help. If you do, they'll be run-down just when they should be in perfect condition for *heavy winter laying*.

Begin *now* to use Dr. LeGear's Poultry Prescription in their feed regularly. More than a million poultry raisers have proved that this famous tonic and regulator is a wonderful aid during moult. Because it improves the whole digestive system, hens get full value from their feed. That means a quicker moult, without *strain*. Give hens this help and *get more winter eggs*.

Get Dr. LeGear's 128 page book on the care of stock and poultry. 10c, at your dealer's, or send to us.



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Twelve weeks old. High Class. Finest Breeding. Both Sexes
Price Reasonable.
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CHESTER WHITES For Sale. Service boars and young pigs, all ages.
ALLAN R. MORTON, ASHVILLE, N. Y.

Reg. O. I. C.'s Booking orders for early Sept. pigs. Prices reasonable.
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CHESTER WHITE PIGS.—A fine lot now ready to ship, either singly or in pairs.
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Reg. Duroc Jersey male pigs, 8 weeks old. Orion Cherry King lines.
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Big Type Poland Chinas All ages. Write your wants.
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LOCUST LAWN FARM, Bird-in-Hand, Box 2, Pa.

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FOR SALE KING OF THE MAY
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Whispering Smith

by Frank H. Spearman

(Continued from Last Week)

CHAPTER XXX

The Fight in the Cache

The very first pocket raided started a row and uncovered eighty head of five-year-old steers bearing a mutilated Duck Bar brand. It was like poking at rattlesnakes to undertake to clean out the grassy retreats of the Cache, but the work was pushed on in spite of protests, threats, and resistance. Every man that rode out openly to make a protest was referred calmly to Rebstock, and before very long Rebstock's cabin had more men around it than had been seen together in the Cache for years. The impression that the whole jig was up, and that the refugees had been sold out by their own boss, was one that no railroad man undertook to discourage. The cowboys insisted on the cattle, with the assurance that Rebstock could explain everything. By noon the Cache was in an uproar. The cowboys were riding carefully, and their guards, rifles in hands, were watching the corners. Ahead of the slowly moving line with the growing bunch of cattle behind it, flourished as it were rather conspicuously, fugitive riders dashed back and forth with curses and yells across the narrow valley. If it had been Whispering Smith's intention to raise a large-sized row it was apparent that he had been successful. Rebstock, driven to desperation, held council after council to determine what to do. Sorties were discussed, ambushes considered, and a pitched battle was planned. But, while ideas were plentiful, no one aspired to lead an attack on Whispering Smith.

Moreover, Williams Cache, it was conceded, would in the end be worsted if the company and the cowmen together seriously undertook with men and unlimited money to clean it out. Whispering Smith's party had no explanation to offer for the round-up, but when Rebstock made it known that the fight was over sending out Du Sang, the rage of the rustlers turned on Du Sang. Again, however, no man wanted to take up personally with Du Sang the question of the reasonableness of Whispering Smith's demand. Instead of doing so, they fell on Rebstock and demanded that if he were boss he make good and send Du Sang out.

Of all this commotion the railroad men saw only the outward indications. As the excitement grew on both sides there was perhaps a little more of display in the way the cattle were run in, especially when some long-lost bunch was brought to light and welcomed with yells from the centre. A steer was killed at noon, everybody fed, and the line moved forward. The wind, which had slept in the sunshine of the morning rose in the afternoon, and the dust whirled in little clouds where men or animals moved. From the centre two men had gone back with the cattle gathered up to that time, and Bill Dancing, with Smith, Stormy Gorman, and two of the cowboys, were heading a draw to cross to the north side of the Cache, when three men rode out into the road five hundred yards ahead, and halted.

Whispering Smith spoke: "There come our men; stop here. This ground in front of us looks good to me; they may have chosen something over there that suits them better. Feel your guns and we'll start forward slowly; don't take your eyes off the bunch, whatever you do. Bill, you go back and help the men with the cattle; there will be four of us against three then."

"Not for mine!" said Bill Dancing bluntly. "You may need help from an old fool yet. I'll see you thru this and look after the cattle, afterward."

"Then, Stormy, one or two of you go back," urged Whispering Smith, speaking to the cowboy foreman without turning his eyes. "There's no need of five of us in this."

But Stormy swore violently. "You go back yourself," exclaimed Stormy, when he could control his feelings. "We'll bring them fellows in for you in ten minutes with their hands in the air."

"I know you would; I know it. But I'm paid for this sort of thing and you are not, and I advise no man to take unnecessary chances. If you all want to stay, why, stay; but don't ride ahead of the line, and let me do all the talking. See that your guns are loose—you'll never have but one chance to pull, and don't pull till you're ready. The albino is riding in the middle now, isn't he? And a little back, playing for a quick drop. Watch him. Who is that on the right? Can it be George Seagrue? Well, this is a bunch. And I guess Karg is with them."

Holding their horses to a slow walk, the two parties gingerly approached each other. When the Cache riders halted the railroad riders halted; and when the three rode the five rode; but the three rode with absolute alignment and acted as one, while Whispering Smith had trouble in holding his men back until the two lines were fifty feet apart.

By this time the youngest of the cowboys had steadied and was thinking hard. Whispering Smith halted. In perfect order and sitting their horses as if they were riding parade, the horses ambling at a snail's pace, the Cache riders advanced in the sunshine like one man. When Du Sang and his companions reined up, less than twelve feet separated the two lines.

In his tan shirt, Du Sang, with his yellow hair, his white eyelashes, and his narrow face, was the least impressive of the three men. The Norwegian Seagrue, rode on the right, his florid blood showing under the tan on his neck and arms. He spoke to the cowboys from the ranch, and on the left the young fellow Karg, with the broken nose, black-eyed and alert, looked the men over in front of him and nodded to Dancing. Du Sang and his companions wore short-armed shirts; rifles were slung at their pommels, and revolvers stuck in their hip-scabbards. Whispering Smith, in his dusty suit of khaki, was the only man in either line who showed no revolver, but a hammerless or muley Savage rifle hung beside his pommel.

Du Sang, blinking, spoke first: "Which of you fellows is heading this round-up?"

"I am heading the round-up," said Whispering Smith. "Why? Have we got some of your cattle?"

The two men spoke as quietly as school-teachers. Whispering Smith's expression in no way changed, except that as he spoke he lifted his eyebrows a little more than usual.

Du Sang looked at him closely as he went on: "What kind of a way is this to treat anybody? To ride into a valley like this and drive a man's cows away from his door without notice or papers? Is your name Smith?"

"My name is Smith; yours is Du Sang. Yes, I'll tell you, Du Sang. I carry an inspector's card from the Mountain Stock Association—do you want to see it? When we get these cattle to the Door, any man in the Cache may come forward and prove his property. I shall leave instructions to that effect when we go, for I want you to go to Medicine Bend with me, Du Sang, as soon as convenient, and the men that are with me will finish the round-up."

"What do you want me for? There's no papers out against me, is there?"

"No, but I'm an officer, Du Sang. I'll see to the papers; I want you for murder."

"So they tell me. Well, you're after the wrong man. But I'll go with you; I don't care about that."

"Neither do I, Du Sang; and as you have some friends along, I won't break up the party. They may come, too."

"What for?"

"For stopping a train at Tower W Saturday night."

The 3 men looked at one another and laughed.

Du Sang with an oath spoke again. "The men you want are in Canada by this time. I can't speak for my friends; I don't know whether they want to go or not. As far as I am concerned, I haven't killed anybody that I know of. I suppose you'll pay my expenses back?"

"Why, yes, Du Sang, if you were coming back I would pay your expenses; but you are not coming back. You are riding down Williams Cache for the last time; you've ridden down it too many times already. This round- up is especially for you. Don't deceive yourself; when you ride with me this time out of the Cache, you won't come back."

Du Sang laughed, but his blinking eyes were as steady as a cat's. It did not escape Whispering Smith's notice that the mettlesome horses ridden by the outlaws were continually working around to the right of his party. He spoke amiably to Karg: "If you can't manage that horse, Karg, I can. Play fair. It looks to me as if you and Du Sang were getting ready to run for it, and leave George Seagrue to shoot his way thru alone."

Du Sang, with some annoyance, intervened: "That's all right; I'll go with you. I'd rather see your papers, but if you're Whispering Smith it's all right. I'm due to shoot out a little game sometime with you at Medicine Bend, anyway."

"Any time, Du Sang; only don't let your hand wabble next time. It's too close to your gun now to pull right."

"Well, I told you I was going to come, didn't I? And I'm coming—now!"

With the last word he whipped out his gun. There was a crash of bullets. Questioned once by McCloud and reproached for taking chances, Whispering Smith answered simply. "I have to take chances," he said. "All I ask is an even break."

But Kennedy had said there was no such thing as an even break with Whispering Smith. A few men in a generation amuse, baffle, and mystify other men with an art based on the principle that the action of the hand is quicker than the action of the eye.

With Whispering Smith the drawing of a revolver and the art of throwing his shots instantly from wherever his hand rested was pure sleight-of-hand. To a dexterity so fatal he added a judgment that had not failed when confronted with deceit. From the moment that Du Sang first spoke, Smith, convinced that he meant to shoot his way thru the line, waited only for the moment to come. When Du Sang's hand moved like a flash of light, Whispering Smith, who was holding his coat lapels in his hands, struck his pistol from the scabbard over his heart and threw a bullet at him before he could fire, as a conjurer throws a vanishing coin into the air. Spurring his horse fearfully as he did so, he dashed at Du Sang and Karg, leaped his horse thru their line and, wheeling at arm's length, shot again. Bill Dancing jumped in his saddle, swayed, and toppled to the ground. Stormy Gorman gave a single whoop as the spectacle and, with his two cowboys at his heels, fled for life.

More serious than all, Smith found himself among three fast revolvers, working from an unmanageable horse. The beast tried to follow the fleeing cowboys, and when faced sharply about showed temper. The trained horses of the outlaws stood like statues, but Smith had to fight with his horse bucking at every shot. He threw his bullets as best he could first over one shoulder and then over the other, and used the last cartridge in his revolver with Du Sang, Seagrue, and Karg shooting at him every time they could fire without hitting one another.

It was not the first time the Williams Cache gang had sworn to get him and had worked together to do it, but for the first time it looked as if they might do it. A single chance was left to Whispering Smith for his life, and with his coat slashed with bullets, he took it. For an instant his life hung on the success of a trick so appallingly awkward that a cleverer man might have failed in turning it. If his rifle should play free in the scabbard as he reached for it, he could fall to the ground, releasing it as he plunged from the saddle, and make a fight on his feet. If the rifle failed to release he was a dead man. To so narrow an issue the cleverest combinations sometimes brought by chance. He dropped his empty revolver, ducked like a mud-hen on his horse's neck, threw back his leg, and, with all the precision he could summon, caught the grip of his muley in both hands. He made his fall heavily to the ground, landing on his shoulder. But as he keeled from the saddle the last thing that rolled over the saddle, like the flash of a porpoise fin, was the barrel of the rifle, secure in his hands.

(Continued Next Week.)

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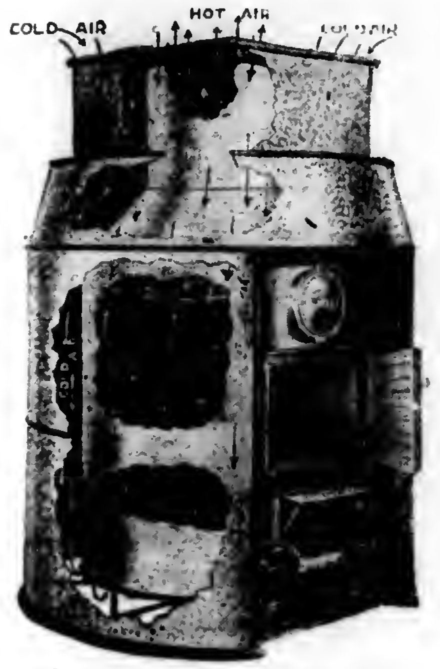

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Markets

PHILADELPHIA PRODUCE

—Sept. 20, 1920.

The market has been ruling very firm on potatoes since our last week's report until today, when prices appeared to ease off somewhat. While supplies cannot be considered heavy, at the same time they are ample. Most coming from N. J., with some from Penn. and there are still a few from the Eastern Shore sections.

The N. J. long stock, Giants, are selling at $2.50@2.75 per 150-lb., sk. for the No. 1 stock and $1.50@1.60 sk. for the No. 2s, while the round stock brings from $3@3.50 per sck. Most of the Penn. offerings are in bulk and these sell from $1.60@2 cwt. The Eastern Shore stock moved slowly today at $2.85@3.25 per bbl. There are the usual supplies of nearby grown potatoes being hauled in by the farmers and these sell generally at 80@90c per ⅝ bsk., on the No. 1s and 40@65c on the No. 2s.

Sweet potatoes took a little spurt today under the very light supplies of nearby stock and prices ranged from $1.10@1.35 per ⅝ bask on primes with No. 2s and mediums at 45@75c per ⅝ bsk. These prices however, will probable not last but a short time as under heavier supplies last week the market was ruling from 90c@$1.25 on No. 1s and 40@75c **on No. 2s. Eastern** Shore sweet potatoes sold here this morning at $4@5 per bbl., for primes and $2 per bbl. for No. 2s.

Vegetables.—Fancy beans are ruling firm, with poor dragging prices running from 75c @$1.50 per ⅝ bsk. Beets are steady and unchanged at 3@3½c per bch. and 75c@$1 per hp. There were about 12 cars or N. Y. state cabbage here which is moving very slowly under the light demand at $12@18 per ton. N. J. cabbage in ⅝ bsks. sells generally at 20@35c per ⅝ bsk. with some extra fancy at 40c. Carrots are showing little or no change at 50@75c per ⅝ bsk. and $1@1.25 per hpr. for the N. Y. state stock.

Cauliflower appears to be higher, the fancy selling at $2.50@2.75 crate with choice at $1@1.75. One car of N. Y. state celery in the rough sold this morning at $3.25 crate, while washed and bunched celery ruled steady and unchanged at 25@75c bunch. A car of celery from Kalamazoo, Michigan was being sold at $2.25 crate. Celery hearts from N. J. points were being sold at 5@8c bch.

Corn is decreasing in supply and prices are advancing. N. J. corn selling this morning at 75c@$1 per ⅝ bsk. and Penn. corn at $1.75@3 per 100 ears. Cucumbers are showing a very wide range in quality and condition, some being good and some very poor and yellow and as a result the market prices take the wide range of 45c@$2.25 bus., with the small pickling cucumbers from $1.25@4.50 bus. Egg plant is in light supply and prices are advancing, sales being made this morning at 40@50c per ⅝ basket. Lettuce continues to improve under the lighter supplies and prices are now ranging from $1@2.25 box containing about 2 doz. heads.

Lima beans are advancing, good, ⅝ bsks. selling at $2.75@3.25 bsk. while hpr limas sell at $3.50@4.50. Onions are selling up to $2.75 per 100 lb. sk. for the best yellows with poorer down to $2 sk. Onions in bu. hprs. sold here this morning at 65c@$1 hpr. White onions are meeting a steady market at $2.25@2.50 sk. for the No. 1s, while the very small white pickling and stewing onions sell promptly at $2@3 hpr. Parsley remains about steady at $1@1.50 hpr. and when loose at 2@2½c bunch. Some parsnips have made their appearance and have been selling at $1@1.25 per ⅝-bsk Green peppers are firmer at 40@60c per ⅝ bsk., but the red peppers are easier at 50@75c per ⅝ basket, while the red tomato pepper rules firm at 90c@$1.25 per bsk. There are a few radishes on the market selling at 1@2½c bunch. Romaine is in light supply at $1.25@1.75 per box. Squash is getting scarcer and bringing 25@50c per ⅝ basket Tomatoes are also showing improvement, best selling at 50@80c per ⅝ basket and poorer at 25@40c bsk. Some white turnips have sold up to $1 per ⅝ bsk., for the best, with some poorly packed and not properly washed at 70c bsk. Spinach is meeting a fair demand at $1.25@1.50 box.

Fruits.—Today saw the heaviest offerings of apples we have had any day so far this season, there being some 18 or 20 cars of Penn., Va., and N. Y. state apples offered and sold, besides free supplies of nearby N. J. apples. In spite of the increased offerings **the market ruled firm and active** especially on the fancy large size red apples, barrel prices ranging about as follows: Alexander, $5@7; Maiden Blush, $4@6.50; Gravenstein, $5@8; Twenty Ounce, $5@7; Jonathans, $5@8; Wealthy, $4.50@5.50; Pippins, $4@4.50; Smokehouse, $3.50@6; Grimes Golden, $3.50@6; Ewalt, $6@6.50; Wolf River, $5@5.50, and McIntosh Red, $6@7. A few of the apples are coming in bushel baskets and these are selling about as follows: Alexanders, $1.50@2; Maiden Blush, $1.25@2; Gravenstein, $1.25@2; Twenty Ounce, $1.50@1.75; Wealthy, $1.15@1.50; Detroit Red, $1.50@1.75; Wolf River, $1.50@1.75; Pippins, 75c@$1.25; Various other varieties, $1@2.

New Jersey apples range from 75c@$1.75 per ⅝ bsk. on No. 1 fruit with No. 2s and culls at 25@75c bsk Crabapples sold this morning at $2@3 bus. and $1.75@2.25 for nearby ⅝ bas. Plums were in much heavier supply today and prices declined. Damsons selling at $2@2.50 bus; prunes at $2.50@3 per bushel, and green gage at $2.25@2.50 bus.

The season on nearby peaches is drawing to a close, and the market is ruling strong at $1.50@3 per ⅝ basket. Some N. Y. peaches on the market of only ordinary quality brought $3 bus., and fancy N. Y. state peaches would sell above this figure. Pears are in good demand, Bartletts selling at $1.75@3.25 bus.; Seckels, $1.75@3 bus. A car of fancy Seckels in barrels sold this morning at $7@11 bbl. Other varieties of pears are selling at $1.50@2.50 bus.

Good grapes are making a good demand, N. J. ⅝ bsk. selling at $1.75@2.25 bs. N. Y. state grapes in pony baskets are selling up to 25@26c bsk., while the large 12 qt. or jumbo brings $1.20@1.25, and the bus. $3@3.25 bsk. A few N. J. quinces have been **on the market and sold at 90c@$1.75** per ⅝ bsk.

Poultry.—Live poultry has ruled firm and practically unchanged from day to day. Supplies of fowl are just about ample for requirements at 32@42c as to size and quality, the extreme price being paid for fancy heavy fat fowl. Spring chickens command from 38@42c lb., when fancy and large for roasting purposes; broiling chickens are showing no change at 36@38c lb, while ducks bring 30@33c lb.

Eggs.—Fancy eggs strong and active. Prices are firmer and higher. At this writing Penn. and other nearby current receipts are bringing 60c doz., with firsts 61@63c doz. Fancy, carefully candled, and selected eggs, are jobbing out at 72@73c doz. Western firsts are commanding 59@60c, while the western extra firsts bring 61@63c doz., and the seconds 50@54c dozen.

NEW YORK PRODUCE

—Sept. 18, 1920.

Butter.—Firm; receipts, 6,694 tubs; creamery, higher than extras, 60½@61c; extra (92 score), 59½@60c; first, (88 to 91 score), 51½@58½c; packing stock, current make, No. 1 41½@42c.

Eggs.—Steady; receipts, 17,121 cases; fresh gathered extra first, 59@61c; do., first 55@57c; state, Pennsylvania and nearby western hennery, white, first to extra, 72@82c; do., brown extra, 68@73c; do., gathered brown and mixed colors first to extra, 55@64c.

Cheese.—Firm; receipts, 1,076 boxes; state, whole milk flats, current make, white and colored, specials, 29@29½c; do., average run, 27@28c; state, whole milk twins, current make specials 28@28¼c; do., average run, 27@27½c.

Vegetables.—Potatoes, L. I., bbl., $3.50@3.75; Jy, long, 165-lb., $2.75@3; Jy, round, 150-lb., $3@3.75 Jy long, $2.25@2.75; S'n, 1st, $2@3.25; No. 2, 75c@$1.12. Sweets, basket, Jersey, 1st, $1.50@2; Jy, 2s, $1@1.25; Md., bskt, $1.25@1.75. Brussels Spts, qt, 20@25c. Beets, nby, bbl., $2@2.75. Carrots, nby, 100, $1@2. Corn, Jy, 100, $1@2.50; Jy, bskt, 75c@$1.50. Celery, crate, State, bch., 15@65c; Jy bch, 15@65c Cucumbers, bsk., $1@2.25. Cabbages, L. I., bbl, 50c@$1; L. I., 100, $1.50@2.50; Jy, bbl, 50c@$1; Red, bbl., $1@1.75. Cauliflowers, nby, crt., $1@3.50; state, crt., $2@3.50. Eggplants, Jy, box, 40@60c; Jy, bskt, 50@75c; Jy, bbl, $1.25@2. Lima Beans, Jy, bskt., $1.50@2.75; L. I., bskt, $1.75@2.75. Lettuce, State, crt., 25c@$1.25. Onions, Wh., bsk., 75c@$2; Y'l., bsk., 75c@$1.25; Red, bsk, 75c@$1.25 Pumpkins, bbl. $2@2.25. Romaine, crt., 50c@$1.75. Turnips, White, 100, bch. $2@4. Rutabaga, bbl., $1@1.50. Tomatoes, nby, box, 35c@$1.50 up-Jy, box, 50c@$1.50; Carrier, 50c@$1.25; So. Jy, box, Acme, 50c@$1.25; Stone, 50c@$1.25; Grant, 25@75c; Up-River, 12-qt. baskt, 25@50c; carrier, 50c@$1.25. Pine Isl., bask., 40@60c; So. Jy, carrier, 50c@$1.

Fresh Fruits.—Apples,—bskt, 50c@$2; bbl., $3@8; boxes, $3.75@4.25. Pears, boxes, $2.75@3; bskt., $1.50@3; bbl., $4@11. Peaches, crt. and bsk., Jy, Elberta, $2.50@4.50; State, Elberta, $2.50@4; do., Crawford, $1.75@2.75; do., Niagara, $2.25@3; Plums, state, bs. 25@50c; Bush, bskt. $1@2.50; 16-qt. bakt., 75c@$1.25. Grapes.—State, Tray, $1.25@1.40; 20-lb. bakt., $1.25@1.40; Del. bsk. $1.25@1.50.

PITTSBURGH PRODUCE

—Sept. 18, 1920.

Butter and Cheese—Prints, 63@63½c; tubs, 62½@63c; cooking, 52@53c; Ohio, 58@59c; cheese, New York full cream, 31@32c; Phila. cream, doz., $1; Longhorns, 31@32c.

Eggs—Fresh select, 60@62c; current receipts, 52@53c; specials, at mark, 55@56c.

Live Poultry—Small hens, lb., 38@40c; do heavy, 40@42c; broilers, lb., 38@40c; roosters, lb., 23@25c; geese, lb., 25@30c; turkeys, lb., 40@45c; ducks, lb., 35@40c; guineas, each, 75c@$1.

Dressed Poultry—Hens, lb., 45@50c; roosters, lb. 28@35c; springers, lb., 45@50c; ducks, spring pound, 50c; turkeys, pound, hog-dressed, 60c.

Fruits—Apples, bu., $1@2.50; do, bbl., $3.50@6; do crab, bu., $2.75@3; plums, b. g., bushel, $1@2.50; do Damson, 20-lb. bas., 75c@$1.25; do bushel, $3@3.50; pears, Bartlett, Oregon, box, $5.50@5.75; do New York, bushel, $1.75@2.50.

BALTIMORE PRODUCE

—Sept. 18, 1920.

Butter—Creamery, Western separator, extras, 58c; do, firsts, 56@57c; Western prints, ½ pound, extras, 59@60c; do, firsts, 57@58c; do, 1 pound, extras, 59@60c; do, firsts, 57@58c; nearby creamery extras, 48@50c; Penn. and Virginia, extras, 39@40c; do., firsts, 37@38c; **store packed, 37@38c.**

Eggs—Western Maryland, Penna. and nearby firsts, 59@60c; Eastern Shore, Maryland and Virginia, firsts, 59@60c; Western (Ohio) firsts, 59@60c; Southern (North Carolina), firsts, **56@57c.**

Live Poultry—Chickens, young, large, per pound, 35@36c; do, small, poor, per pound, 33@34c; do, old roosters, per pound, 21@22c; old hens, over 4 pounds, per pound, 45c; do, small, per pound, 30c; white Leghorn hens, per pound, 30c; do, young white Leghorns, 1½ lbs., per pound, 33c; do, under 1½ pounds, 32c. Ducks—Muscovy and mongrel, young, per pound, 30@31c; do, white Pekins, young, per pound, 31@32c; puddle 4 pounds and over per pound, 30c; do, smaller, poor, per pound, 25@26c. Turkeys, choice, young, per pound, 45@50c; pigeons, old, per pair, 35@40c; young, per pair, 35@40c. Guinea fowls, young, 1½ lbs., each, 75c; do, small, 1 to 1¼ pounds, each, 50@60c.

YORK PRODUCE MARKETS

—Sept. 18, 1920.

Eggs.—65-70c per dozen.

Butter.—Country, 65c per lb.; separator, 65@75c lb.; milk, 14c quart.

Poultry.—Hens, 30c lb.; springers, 32c lb.; dressed, $1@2 each.

Vegetables.—Potatoes, 15@25c ½ peck; $1@1.40 bu.; cabbage, 5@10c head; lettuce, 5c head; beets, 5c bunch; radishes, 6c bch.; onions, 10c box; 20@25c ½ peck; corn, 20@40c dozen; peas, 25@35c ¼ peck; beans, 15c ¼ peck; lima beans, 25c quart; peppers, 15@20c dozen; egg plants, 5@10c each; squash, 5c each; cucumbers, 75c@$1 per 100; ham ,sliced, 45@60c lb.; whole, 40@45c pound.

Fruit.—Apples, 10@40c ½ peck; 5@15c box; pears, 10c box; 15c ½ peck; plums, 12@15c quart; peaches, 15c box; 20@30c ¼ peck; $1.75@2.50 basket; tomatoes, 10@20c ¼ peck.

Retail Grain Market.—Wheat, $3; corn, $2; oats, $1; rye, $1.75; bran, $3 per cwt.; middlings, $4 per cwt.

Wholesale Grain Market.—Wheat, $2.45; corn, $1.55; oats, 80c; rye, $1.35; bran, $60 per ton; middlings, $70 per ton.

PHILADELPHIA LIVESTOCK

—Sept. 18, 1920.

Receipts of the week ending Sept. 11th, 1920, were as fololws:

	Beef Cattle	Sheep and Lambs	Hogs
Tatals for week	2,392	8,384	8,745
Previous Week	2,383	8,700	7,710

Calves—Receipts of calves were 1,505 head against 2,432 head previous week.

Beef Cattle—Steers and cows were quiet, but steady under moderate offerings. Veal of fine quality was firm and in good demand. Quotations: Steers, good to choice, $15@16.50; fair to good, $13@15; common to fair, $11.50@13; cows, good to choice, 8½@10c; do, fair to good, 7@8½c; bulls, 7@9½c; calves extra to choice, $19@20; fair to good, $17.50@18.50; common, $12@13; Tennessee, $17@18; other southerns, $8@13.

Sheep and Lambs—Sheep ruled firm, with fine grades slightly higher. Lamb was firm and higher, with a fair demand for fine stock. Quotations: Sheared sheep, wethers, extra $9@9.50; do., good to choice, $7@8; medium, $5@6; do., common, $2@3; ewes, heavy, fat, $5.50@6; lambs, spring, choice, $14.50@15.25; medium, $11.50@13; common, $8.75@10.25.

Hogs.—The market ruled firm and higher under stronger outside advices, a fair demand and light offerings. We quote: Best western $20; good, nearby, $18@18.50.

City Dressed Stock—Steers, heifers, and cows were in fair request and steady. Lamb and veal of fine quality sold fairly and values were well maintained. Hogs were firm and higher. We quote: Steers, 20@28c; heifers, 18@26c; cows, choice, 18@21c; cows, light, 12@16c; calves, city dressed, choice, 30@32c; calves, country dressed, 27@29c; lambs, spring choice, 28@32c; sheep, 10@20c; hogs 26½@27c.

NEW YORK HAY AND GRAIN

—Sept. 18, 1920.

Feed—The market for mill feed was inactive and Western feed was being offered more freely, and while prices were lowered about a dollar buyers were still indifferent and the easier markets failed to attract business.

Quotations: City feed bran, $50; middling, $58, in 100-pound sacks; red dog, $82, nominal, in 100-pound sacks; Western spring bran, $48.50; standard middling, $53.50; flour middling, $66; red dog, $79.75, all in 100-pound sacks, 30-day shipment. Oat feed, $32; rye middlings, $55; white hominy feed, $64, all in 100-pound sacks. Cottonseed oil meal, $60.50; linseed oil meal, $61, in 100-pound sacks.

Hay and Straw—Trade continues very quiet at 33d street shed and the market is easy and tending downward. Values at upper Manhattan stations and at Bushwick station, Brooklyn, are just a trifle above 33d street, but there is still a firm tone at Brooklyn Eastern District Terminal and values there are at least $2 per ton higher than at other points. A river barge is in at Wallabout, Brooklyn, this morning but no sales reported. Straw nominal in the absence of offerings.

Hay—Large bales, Timothy, No. 1, $48; No. 2, $45@46; No. 3, $43@44; shipping, $41@42; no grade, $25@35. Clover mixed, fancy, $46; No. 1, $43@45; No. 2, $40@42; Straw, large bales, No. 1 rye, $25@26; No. 1 oat, $20@22; No. 1 wheat, $20@22.

Wheat—No 2, red, c. i. f., $2.68; No. 2, hard winter, $2.68.

Corn—No. 2, yellow, $1.49¼.

Oats—No. 2 white, 75c; No. 3 white, 74c; rye, c. i. f., $2.05; barley, feeding, $1.10@1.15.

PITTSBURGH HAY AND GRAIN

—Sept. 18, 1920.

During the beginning of the week, receipts were normal and fully sufficient to supply the demand but they have eased up again. Buyers are taking care of all arrivals readily at quotations. At the present writing, we can confidently predict a firm market for the time being.

Absolutely no straw arriving while the demand is gradually improving. A few cars could be readily disposed of at top figures.

Oat receipts, while not heavy, are still in excess of demand. Market a trifle weak. Looks like some what lower prices.

No ear corn arriving.

Shelled corn receipts about normal and equal to demand. Market quiet but steady. The following prices can be realized.

No. 1 Timothy, $37@37.50; Standard Timothy, $35@35.50; No. 2 Timothy, $32.50@33.50; No. 3 Timothy, $29@30; No. 1 Lt. Clo. Mixed, $32.50@33.50; No. 1 Clover Mixed, $32.50@33; No. 1 Oat Straw, $17@17.50; No. 2 Oat Straw, $16.50@17; No. 1 Wheat Straw, $16.50@17; No. 2 Wheat Straw, $16@16.50; No. 1 Rye Straw, $17@17.50; No. 2 Rye Straw, $16.50@17; New No. 2 White Oats, 68@69c; No. 2 Yellow Ear Corn, $1.50@1.55; No. 3 Yellow Shelled Corn, $1.45@1.46.

PHILADELPHIA HAY AND GRAIN

—Sept. 18, 1920.

Baled Hay and Straw.—Receipts, 216 tons of hay and 3 cars of straw. Hay steady. Straw firmly held. Quotations were as follows: Old timothy hay, No. 1, none here; No. 2, $31@32; No. 3, $27@29; samp. $23@25; no grade, $18@21; old clover-mixed hay, light mixed, $29@30; No. 1 mixed, $27@28; light, mixed, $29@30; No. 1 mixed, $27@28; new hay, as to quality and condition, $25@30. Straw—No. 1 straight rye, $17.50@18; No. 2 do., $16.50@17; No. 1, tangled rye, $15@16; No. 2 do., $14.50@15; No. 1 wheat straw, $14.50@15; No. 2 do., $13.50@14.

Bran.—Dull and barely steady. We quote: Car lots, including sacks: Soft winter bran, western, in 100-lb. sacks, per ton $51.50@52; spring bran, in 100-lb. sacks, per ton, $50.50@51.

Corn.—No. 1 yellow, $1.50@1.55.

Wheat—New; No. 2 red winter, $2.65@2.70.; No. 2 red winter, garlicky, $2.55@2.60.

Oats.—No. 2 white, 73@74c; No. 3 white 72@73c.

PHILADELPHIA DAIRY MARKET

—Sept. 18, 1920.

Butter—Receipts, 2986 tubs. There was very little wholesale trading as usual on Saturday, but prices were firmly maintained. Fresh, solid-packed creamery, high-scoring goods, 61½@63½c; the latter for jobbing sales; extra, 60½c; do, extra firsts, 59½c; firsts, 52@56c; seconds, 46@51c; sweet creamery, choice to fancy, 62½@64½c; fair to good, 51@61½c; ladle-packed, as to quality, 44@47c; packing stock, 39@41c; fancy brands of nearby prints were jobbing at 69@72c; good to choice, 61@68c; fair, 58@60c.

Cheese—Well cleaned up and firm. New York, whole milk, current make, fancy flats, 29@29½c; common to fair, 25@28c; Longhorns, 29@29½c; single Daisies, 29@29½c; jobbing sales of fancy goods, 30@31c.

INTERSTATE MILK PRICES

—Sept. 20, 1920.

August milk prices continue in force for September.

NEW YORK MILK MARKET

—Sept. 20, 1920.

There was a better demand last week and altho supply fully as liberal as the week previous, surplus was reduced considerably. The rate for September for 3 percent milk in 200 mile zone is $3.65 per 100 lbs.; add 4c per 100 lbs. for each one-tenth of 1 percent additional butterfat.

Receipts of milk and cream in 40-quart cans for the week ending September 18th, 1920 were as follows:

Railroad	Milk	Cream
Erie	38,420	4,010
Susquehanna	8,012	106
West Shore	13,828	1,986
Lackawanna	54,835	2,963
N. Y. Central (long haul)	196,678	4,676
Ontario	45,122	1,880
Lehigh Valley	57,525	933
New Haven	6,850	62
Pennsylvania	12,877	408
Other Sources	6,200	250
Totals	440,347	17,274
Same week last year	383,864	17,113

TOBACCO MARKET

—Sept. 20, 1920.

Prime interest was shown in market valuations which are now in the formative stage. Large sales were reported from some localities. Prices were variable but generally satisfactory to sellers. One buyer reported a large volume of contracts at an average of about $20 per cwt., but the report was accepted with some doubt. Practically the whole of the more conservative growers are awaiting further developments and are not offering their tobacco. It seems evident that product will command at least $23 to 25 per cwt. and there are those of good judgment who predict a maximum of not less than $30 per cwt. for desirable offerings.

It is noted that the market situation is warming and that all buyers are preparing to become active. Verily it is an opportunity to realize well on what is conceded to be an excellent crop and the one great point at present is not to be rushed in selling. Illustrating the advances that may be expected for seed leaf the soaring price of Havana tobacco should be noted. Several weeks ago most of this comparatively early variety was contracted at the high price of $50 per cwt. Now the same is commanding $60, and is eagerly sought by several sources. The acreage of this variety is relatively small and the yield per acre much less than broadleaf. From other cigar leaf localities, too, some reports of good prices for the new crop and it was significantly stated by the Wall Street Journal that "leaf tobacco prices are going higher notwithstanding outlook for bumper crop." The same journal said: "tobacco prices up 30 percent in Wisconsin and Connecticut, Georgia and South Carolina up 20 percent."

Farm Products Prices and Prospects

SLIGHT IMPROVEMENT IN HOG PRODUCTS

Packers report heavy purchases of lard on continental account during the past week. These have been anticipated for several weeks but were slow to materialize and the trade had begun to fear that the season would pass without their realization, especially when foreign exchanges began to slump. Continued inquiry indicates that more foreign business is coming so that the burden of a big lard supply may be lifted from the hog market before the fall run of hogs starts. The export movement since November 1st, 1919 shows a decrease of 898,000,000 pounds under that of the preceding year, and of lard 135,000,000 pounds. The decrease in exports of all products has been 1,035,000,000 pounds, which explains the big accumulation in this country. The number of hogs slaughtered has decreased during the same period. For the full year ending July 1, the exports of hog products decreased 1,200,000,000 pounds, but the yield of products decreased only 772,000,000 pounds. Domestic consumption increased to some extent but not enough to balance up. It is evident, however, that the decrease in pork production is approaching the point at which domestic and export demands will be greater than the supply, while hogs will sell lower during the fall and winter run—profitable prices by next spring seem quite probable based on the provision outlook.

BIG DECREASE IN SHEEP RECEIPTS

Sheep growers have applied the fast cure to the lamb market with decidedly effective results. The run at ten markets was about 55 percent of that of a year ago. The dressed trade showed a downward trend during the week. As the shortage on the hoof was not immediately reflected in eastern coolers. Furthermore, packers still have a lot of frozen foreign lamb to feed into market channels upon price bulges.

The western lamb crop is far below normal and many desire to retain ewe lambs for restocking. There is every reason to believe that lowest prices for the season have been recorded but finishers who are paying up to $13.50 at Chicago and Omaha for thin lambs are taking a big chance. The shortage in the western run insures a high feeder market and thin natives at lower prices than westerners are bringing may be safer purchases if not to unthrifty.

SLACKENING INDUSTRY CHECKS HORSE MARTS

Curtailment in industries is being reflected more and more in the horse market. Money stringency is also a factor. Good horses continue to sell fairly well but green and unfinished kinds are hard to sell even at low prices. Good heavy drafters, loggers, wagon horses, and southern chunks, along with cotton mules, are in greatest demand.

Chicago quotes: Good and choice heavy drafters, $240@350. Common and medium drafters, $140@225. Farm mares $100@180. Expressers, $140@200.

St. Louis: Medium and good drafters $175@240. Eastern chunks, good $100@150. Choice southerners, $120@175. Common to good southerners $30@110. Mules 16 to 17 hands, bulk $245@290. 15 to 15½ hands, bulk $150@200. 15 hands, bulk, $120@150.

SIGNS OF DEFLATION

Farmers are not opposed to deflation but they wish all interests to be treated alike. So far this has not been the case. Some of the farmers' products returned nearly to the pre-war level, while some other things not products of the farm have gone higher. Finally, however, steel prices which were among the most flagrantly inflated have passed the crest of the upward swing. Since steel prices are slow to reflect conditions this event is very significant. It does not mean, however, that further deflation is to come with a rush, and there may be an upward swing during the fall months. Dun's index figure for September 1, based upon prices of many commodities is $17.97 as against $18.82 on August 1, and $20.86 in February. The declines are 4.5 percent for the month and 13.9 percent in the seven months. Most of the decline during August is accounted for by the break in cotton and cotton goods prices.

FREIGHT LOAD AT PEAK

Altho car scarcity continues, the railroads are making progress in moving the freight. Their figures indicate that in the week ending August 21st, the number of cars loaded was the largest of any week during the year, and nearly equalled the number loaded for any week during the war. The truth is that the freight load to be moved is serious. The south is said to be suffering from an acute shortage of cars, yet this year's movement is the greatest in the history of the southern roads.

LARGEST CORN CROP ON RECORD

The September government crop report indicated a yield of 3,131,000,000 bushels of corn, the largest on record by 6,000,000 bushels and compares with 2,917,000,000 bushels harvested last year. The condition of the crop was the highest for September in fourteen years. Production is becoming more widely distributed as the yield in the seven surplus states during the previous record year, 1912, was 189,000,000 greater than this year.

Weather the past week over most of the belt has not been the kind needed to hasten maturity of the crop. A great deal of corn needs until October 1st to ripen. The official Iowa report says that 87 percent of the crop of that state would be safe by October 15th, while the average date of the first killing frost is October 10th. Since the crop is large frost damage must be tremendous before it will affect materially the receipts at central markets during the coming year.

Old corn reserves are large. Two crops averaging 3,000,000,000 bushels have not been produced in succession before. The yield of oats and barley is also large altho the total of the three crops is below that of 1915. Kaffir crops also are the largest on record. The live stock population to consume the crop is materially below that of last year. Demands for corn for manufacture at eastern points will be partially met by Argentine corn. That country has exported 125,000,000 bushels since November 1, 1919, mostly to Europe, and has nearly 200,000,000 bushels available now. Of over 4,000,000 bushels exported last week, 976,000 bushels was sent to this country. All in all the outlook for those who put their corn into live stock seems better than for those who sell the grain at the elevator. Farmers seem disposed to sell old and new corn, contracts being made for the new at 95c and $1 per bushel for No. 4, first half of December delivery, at interior Illinois points.

WOOL BUYING EXPECTED SOON

While no sales of wool of consequence have been made public as yet, buyers are inquiring in a manner to indicate that purchases are to be made soon. The American Woolen Company's prices on goods for spring delivery represent an average decline of about 20 percent from the February level and the wool market is not expected to show a greater decline. Quotation are still nominal but are assuming a more established character. Boston quotes: Ohio and Pennsylvania fleeces Delaine unwashed 60@65c; fine unwashed, 50@55c. Half blood combing, 60@62c; three-eighths blood combing, 45@47c. Michigan and New York fleeces-Fine unwashed, 50@52c; Delaine unwashed, 58@60c; half blood unwashed 60c.

BULLISH WHEAT POSITION INDICATED BY THE GOVERNMENT'S REPORT

A spring wheat crop of 237,000,000 bushels was a decided disappointment showing 25,000,000 bushels under the August returns. Total wheat crop for the country this year is 770,000,000 bushels, against 941,000,000 bushels harvested in 1919, and suggests an exportable surplus of 200,000,000 to 250,000,000 bushels after including the carry over from 1919. It is estimated that around 150,000,000 bushels of the surplus has either been sold and shipped abroad, or else is under contract to move out. Drought, heat and black rust was responsible for the losses in spring wheat in August. The total crop for the country is 20,000,000 bushels less than the 1913-17 average.

Foreign crops reports are rather unfavorable. Italy expects to buy from 90,000,000 to 100,000,000 bushels of wheat this season, while France requires around 80,000,000 bushels of wheat, corn and rye, the corn being needed for mixing purposes, as official orders force mills to use a certain percentage of substitutes in wheat and rye flour.

BIG INCREASE IN CLOVER SEED

The government's estimates that the acreage intended for clover seed is 16.3 percent more than was cut last year, and the condition is 16.6 percent above the average. The forecast of yield is about 31.8 percent more than last year. The crop last year was 1,099,000 bushels, 1,197,000 bushels in 1918, and 1,488,000 in 1917. Wisconsin and Minnesota show the poorest condition and Ohio is only a shade better. Illinois has the largest acreage but Wisconsin has the largest crop. Latest quotations are: Toledo, Prime red clover per bushel $16.30, Prime timothy, $4.15.

At this time of seed corn selection you might like to send a postcard to the college of agriculture at Ithaca for F 129, a publication on improving the corn crop by selection and breeding.

So few birds are harmful that when one has doubts, it is better to protect them all.

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Crestmont Farm, 31 N. Fourth St., Sunbury, Pa.

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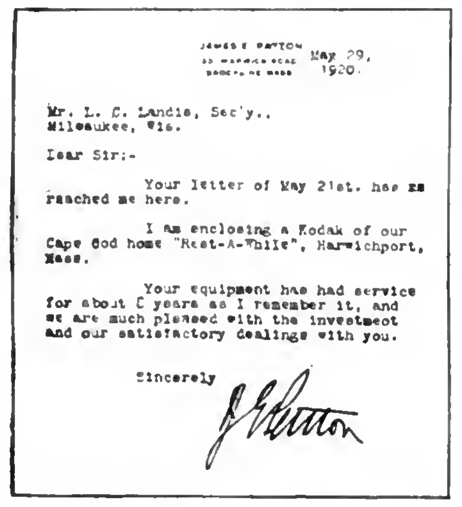

May 29,
1920.

Mr. L. C. Landis, Sec'y.,
Milwaukee, Wis.

Dear Sir:-

Your letter of May 21st. has [illegible] reached me here.

I am enclosing a Kodak of our Cape Cod home "Rest-A-While", Harwichport, Mass.

Your equipment has had service for about [illegible] years as I remember it, and we are much pleased with the investment and our satisfactory dealings with you.

Sincerely
J E Patton

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Everything sold. Booking orders for gilts bred for fall farrow, and pigs for Pig Club work only.
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Try Reg. Big Type Spotted Poland Chinas The hog of the hour. Write for prices. Satisfaction guaranteed or money refunded.
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O. I. C.'s 2 registered boars, born May 30, 1920. Register numbers 94686 [illegible]
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HEAD YOUR BERKSHIRE HERD with a son of Highwood Majestic 19th. I have five from spring farrow. Write for prices and pedigrees.
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Large Berkshire Swine Registered. High Grade. Prices reasonable. Write HOME FARM, Center Valley, Pa.

O. I. C. Males 2 to 4 months old. Satisfaction [illegible]
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By PATHFINDER
dam by Great Sensation, heads our Duroc herd. Line bred Pathfinder offering of 40 head at Public Auction Dec. 2nd. Get a catalog.
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All ages. Strong and vigorous stock. When you buy you want the best, don't you? Then write us. Inspection invited. ROSS B. WITMER, LAMPETER, PA. Member Lanc. Hampshire Breeders' Co-operative Association.

REGISTERED DUROC-JERSEY PIGS
$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs.
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Fashion Giant and Ohio King, our 1,000 lb. boars of advanced breeding. Sows, bred pigs in pairs, not akin, out of 700 and 800 lb. sows. Address
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All ages. Bargains in bred gilts and boars of all ages. We are overstocked and the price is right.
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Select a breeder from a large litter. Pay when you see stock. No cash in advance.
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FOR HOGS
Write for prices, feeding directions, etc.
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Offer 20 registered Berkshire gilts of April farrow weighing 185 to 200 pounds, by Symboleer's Masterpiece, the wonder boar and son of our American Champion, Symboleer's Junior. 2 boars suitable to head the best herds anywhere.

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Will please you.
Best and largest herd in East.
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Reg. Berskshires with size and quality; long bodies, good in back and legs. Spring pigs and bred sows.
NEARBY STOCK FARM, POTTSGROVE, PA.

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Quality Growthiness Prolificacy
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Robt E. Atkinson, Wrightstown, Pa. Bell Phone.

Special Sale REGISTERED DUROC SOWS bred for Summer farrow, $65.00 each, registered and express paid.
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Chester Whites Boars and Sow Pigs. Bred Sows. Collie dogs.
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REG. O. I. C. PIGS, Aug. 1st farrow. Quality guaranteed. Two gilts, 7 months old.
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In order to devote our entire time and space to Ayrshire cattle, we are dispersing our herd of BIG BLACK BERKSHIRES at private sale. Offering includes bred sows and gilts, tried service boars, together with young sow and boar pigs of various ages. All stock is priced to sell. Call or write early to secure best selection.
CRESTMONT FARM, 31 N. Fourth St., Sunbury, Pa.

READY WEEKLY 125 PIGS
75 Chester and Yorkshire Cross, 50 Chester and Berkshire Cross farrows, sows or boars, 6 to 7 weeks old $6 each; 8 to 10 weeks old $7 each. Boars $8. These pigs are the result of several years of selective breeding and show the blood value of big type registered boars. They have the bone, back and barrel of the purebred, feed easy, grow fast, dress light. Shipped on approval. Pay C. O. D. if satisfied. Reference Waltham National Bank.
SUBURBAN LIVE STOCK CO., Waltham, Mass.

CURING TOBACCO

A New Jersey, amature tobacco grower sent us a query on the curing of tobacco. We referred it to J. Aldus Herr, of Lancaster County, Pa., who writes as follows:

"It is a rather difficult question to answer without knowing more about the conditions. If the variety is the Pennsylvania Seed Leaf it should be topped, leaving about 15 leaves to the stalk. About three lower leaves, which will be more or less soiled, should be bunched separately. After the tobacco has been topped about two weeks, suckers will appear. These "suck" the strength from the stalk and should be removed when about six inches long, and the plant will mature in a week or ten days after they are taken off. The plants should be fairly ripe when it is cut. If the writer has a large amount he will need tobacco shears for the work, but if it is a small lot a hatchet or small saw will do.

"Do not let it remain in the hot sun too long or the leaves will sunburn and be worthless. After the plant wilts so the leaves will not break readily it is put on lath made of wood. These are 1¼ inches wide, ¾ inches thick and four feet long. A a spear is needed to pass thru the butt of the stalk and the lath is run this about six inches from the end of butt. The tobacco is then ready to hang in a well ventilated shed to cure. If there is just a few stalks, a nail may be driven thru the stalk and this will do just as well.

"When the ribs of the leaves are perfectly dry it is ready to prepare for market. First, the leaves must be made pliable so they will not break. This work is done in damp weather. Pull the leaves off the stalk and put about twelve good leaves in a "hank," having them of nearly equal length. Use one of the best leaves to wrap round the butt of the "hank" to hold them together. Put in a fairly tight box, press down firmly and nail on lid. It should be stored where it is not too damp—preferably up stairs—for six or eight months. After that time it is ready for use."

BUY COTTON SEED MEAL INSTEAD OF COTTON SEED FOOD

The farmers, dairymen and stockmen of Pennsylvania should learn to distinguish between cotton seed meals and cotton seed feeds as sold in Pennsylvania, if they are to secure adequate returns on their money invested in feeding stuffs, according to the Bureau of Chemistry, Pennsylvania Department of Agriculture.

The laws of Pennsylvania provide that feed sold as cotton seed meal shall contain at least 38 percent of protein and not more than 10 percent of fiber. Cottonseed feed products containing less than 38 percent protein and more than 10 percent fiber can only be sold as cotton seed feed.

Some cotton seed feed sold in the state contains as high as 36 percent protein and dairymen are misled into believing that the products they are purchasing is cotton seed meal. The Bureau of Chemistry, from time to time has found shipments of cotton seed feed improperly labeled as cotton seed meal and prosecutions in these cases have been ordered.

If you are buying cotton seed feed containing less than 38 percent protein, it is not cotton seed meal and the product is not as good as the higher grade meals.

PASSING EVENTS IN PICTURES

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(Photo. Copyright by Underwood & Underwood.)

1—"I don't Wanna Go Away" says little boy leaving with parents for old country.
2—"Little Frisky" weighs 28 pounds and is 28 inches tall.
3—Mrs. William F. Cody, widow of "Buffalo Bill."
4—Eagle Rock, Cal., of Quaint Indian Tradition.
5—German Cruiser Allocated to America Being Towed into New York Harbor.
6—Garden of Eden where Eve's Tree has just been destroyed. Euphrates River in Background.
7—Navajo Indian Herding Sheep and Goats at Fort Defiance, Arizona.
8—Human Sailboating has become popular at the Shore Resorts.
9—N. Y. City College teaches students practical mechanics.
10—Gilbert Campling with model of his Scooter Motor he has just invented.

Facts in BLACK & WHITE

Holstein Clubs are Flourishing Everywhere

Holstein Clubs, country, state and district, have been organized thruout the country and are making wonderful progress in establishing testing associations, and in co-operative effort in eradicating disease among their animals. They are receiving definite and systematic aid from the Extension Service activities of The Holstein-Friesian Association. Members are inspired also with ideals in dairying and dealing, and in many ways the greatest good for all Holstein breeders is being propagated.

Read the whole big story of Holstein progress in our free booklet. Send today.

THE HOLSTEIN-FRIESIAN ASSOCIATION
218 Hudson Street
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45 Years on the Line
COME TO HEADQUARTERS FOR
COTTON SEED MEAL
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Established 1875.
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MEMPHIS, TENN.
Our Brand on the Tag Means Quality in the Bag

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Of 21 head Registered Big Type Berkshires on Saturday Oct. 2, 1920, at Locust Hill Farm ½ mile West of Littlestown, Pa. on State Road to Gettysburg.
THE SALE CONSISTS OF
2 extra good Herd Boars, Bred Sows, bred and open gilts, boar and sow pigs These hogs are of the best blood lines of the breed.
Sale to start at 1 o'clock p. m. Terms of Sale cash.
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The farmer's old reliable treatment for Lump Jaw in cattle.
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A book of 197 pages and 67 illustrations. It is FREE.
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Fox, Coon Skunk, and Rabbit Hounds; also puppies and started dogs. Buy now and know your dog when the season opens. Stamp for reply.
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Registered Yearling Shropshire Rams For Sale
Chesterbrook Farm, Berwyn Pa.

For Sale—Female Airedale, with papers, 17 months old, good farm dog, $30. Three female Airedales, 2 months old, $5, one male $10. R. E. HOWE. WYSOX, PA.

REG. BIG TYPE POLAND CHINA PIGS. Hampshire Down Sheep, all from the best blood and priced right. C. E. SECHLER, MARKLETON, PA.

Chester Whites and HAMPSHIRE SHEEP Write your wants. We can please you. TWIN BROOK FARM, Newville, Pa.

SHIP US your cultivated chestnuts, fancy eggs, calves and poultry. WM. H. COHEN & CO., 232 WASHINGTON ST., NEW YORK CITY.

LIVESTOCK NOTES

By Prof. W. H. TOMHAVE

Select a Good Breeding Ram

The breeding ram for a grade or pure-bred flock of ewes should always be selected with a great deal of care. In the first place, nothing but a pure-bred ram should be used upon any flock. The mere fact that the ram is a pure-bred should not be taken as a stamp of approval of being a desirable individual. There are plenty of poor pure-breds in the country, which if used will not improve the quality of the flock. Unless the ram that is used is a better individual than the average ewes in the flock, the lambs produced can not be expected to show more quality and develop into better individuals than the sire and dam.

If a good pure-bred ram is used, even tho some of the ewes in the flock may not be especially desirable individuals, good market lambs can be produced or at least the lambs will be an improvement over the dams. A pure-bred ram possesses greater power transmitting his qualities to the offspring than the grade ewes. If these qualities are desirable, it will result in an improvement in the flock; if undesirable, no improvement will result from such breeding.

For the production of market lambs, a ram of the mutton type must be used. The breed selected is of less importance than the selection of the good individual. A good breeding ram should show strong masculine character which is usually indicated by a wide nose and open nostrils, large bright eyes, active appearance, with a stylish carriage. He should conform to mutton type which calls for a wide, deep body with plenty of length. The ribs should be well sprung with the width well carried back over the loin and rump. The hind quarters should be deep and well filled down in the twist. Width of chest and fore flank should not be overlooked. The fleece of the breeding ram should not be neglected. A dense fleece free from hair and a long smooth uniform staple is desirable.

If the flock of ewes on the farm is lacking in some desirable quality such as compact fleece or mutton type, it is highly essential that the ram selected be strong in that particular respect. The quality of the flock can be materially improved in a few years by the use of rams of a desirable type if each generation is followed by a ram of the same general type.

Silage for Fattening Cattle

The use of corn silage for beef production has materially changed the method of fattening cattle for market. It has not only changed the method of feeding, but has also increased the net returns to the farmer from cattle feeding. When silage was first used it was found that it improved the quality and character of the ration, but that it was necessary to supplement the silage with a considerable amount of corn or other concentrate feed in order to get the cattle to make satisfactory gains and put on the finish necessary for desirable market cattle. This condition was due to the fact that corn was put in the silo in a green stage before it had been properly matured. The corn plant contains the maximum amount of food nutrients just when it is fully matured or when it is ready to be cut and shocked. If the corn can be stored without loss when in this condition, the maximum amount of feed is secured from an acre of corn. It is not only essential that it be stored to conserve the food nutrients but it should be put up in the most palatable form possible.

Corn that is put in the silo will loose a certain amount of its food nutrients thru heating and fermentation, but the loss is less than when it is cut and shocked and handled as corn and storer. The loss that takes place thru weathering and leeching from fall rains is greatly in excess of any loss that occurs by putting the corn in the silo. The corn that goes into the silo is also available for feeding in the most succulent and palatable form. The ears and stalks will not dry out and become hard and impalatable.

Corn silage made from well matured corn is the most satisfactory feed for feeding cattle for market. The results of feeding trials on many of the farms in the country and the different experiment stations show that it is possible to produce very satisfactory market cattle by the use of an unlimited silage ration supplemented with a concentrated protein feed of some kind. It is not necessary to supply corn or other grain feed except the protein feed such as cottonseed meal or oil meal. It has not only been found that satisfactory gains can be made but the return from cattle feeding has in practically every case been increased about ten dollars per head when silage was fed as part or all of the roughage as compared with no silage in the ration.

The feeding of silage not only increases the financial returns from the operation, but it also makes the work of feeding cattle much easier and more satisfactory than when the corn is fed as broken ear corn or corn meal and the storer fed whole or shredded. It is estimated that the increase in the number of cattle that can be fed from an acre of corn is from twenty-five to thirty percent when the corn is handled thru the silo. The increased food nutrients per acre and the difference in the financial returns from the use of silage for fattening cattle are such as to make silage practically essential for successful cattle feeding.

POOLING WOOL SALES

Does it pay farmers who raise sheep to pool their wool and market is cooperatively thru a wool growers' Association?

That question has been debated by farmers of Lawrence County, Pa., for some time and they have proven that it does pay, both by the success of last year's pool and also by the faith they are placing in the proposition this year, which is indicated by the greater number adopting the pooling plan.

The Lawrence County Sheep & Wool Growers' Association received the wool from their members at their warehouse in New Castle, July 1st, 2nd and 3rd. Each farmer's clip was delivered, packed in wool sacks, weighed by the association and the grower given a warehouse receipt for the amount of wool which he had. Fire insurance is being carried on the wool while it is in storage. The Association plans to hold the wool till a market is created and a real price basis reached.

Last year the Lawrence County Sheep & Wool Growers' Association handled 105 clips, totaling 31,260 pounds. At present there are 192 clips in storage, amounting to 49,435 pounds. This year wool growers from Butler and Beaver Counties are pooling with the Lawrence County Association. By combining the pools in this way the rate of over-head expenses to each farmer is greatly reduced, which, if each were separate this expense would be much greater. The committee estimates that the pool can be conducted by a one cent per pound charge, or less.

The Association will have the wool graded by an expert grader.

IN ATTENDANCE AT THE CHESTER COUNTY BREEDERS' MEETING

From left to right: P. M. Sharpless, Thos. S. Butler, Wallace MacMonnies, James E. Dodge, James G. Watson, Hugh G. Van Pelt, Morris T. Phillips, Secretary Rasmussen, Secretary E. T. Meredith, D. S. Adams, M. D. Munn, F. P. Willits, Robert Scoville.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Chronic Cough.—Every morning my horse does considerable coughing, especially when eating dry feed. So far as I can tell he is in seemingly in good health otherwise. Has no discharge from nose. D. L., Spring Mills, Pa.—Apply equal parts tincture of iodine and camphorated oil to throat once a day. Dampen his feed. Also give a tablespoonful powered licorice three times a day, in ground feed.

Sprained Tendon.—The back cords of fore leg of one of my horses is thickened and tender. He does not limp when walking, but does when trotting. A. J. H., Meadville, Pa.—Don't drive faster than a walk. Clip off hair and apply one part turpentine and two parts raw linseed oil to thickened tendon every day or two.

Abscess.—I have a cow 3 years old, troubled with a swollen jaw. This swelling is quite extensive, affects the throat some. Our veterinary opened bunch and quite a quantity of pus escaped. Have injected Creolin lotion into pocket. Now there are several small abscesses which discharge white pus. Have been injecting creolin and water into the wounds daily. Soon as one heals another forms and has to be opened. This has been going on for the past six weeks. The calf runs with her. Is this ailment contagious. H. J. M., Dover, Del.—Your cow suffers from a suppurative glandular ailment, but it is not contagious. Give her one dram of potassium iodide at dose in feed or in drinking water twice a day. Paint swollen glands with tincture of iodine daily, also swab out abscess with tincture iodine, occasionally.

Infected Udder.—One of my cows has udder trouble in two quarters. The lower part of bag and upper part of teat swells every few days. The milk is bad and full of rice like curds. Have applied carbolized vaseline which seems to afford only temporary relief. J. K., Camdon, N. Y.—Apply one part iodine and twelve parts fresh lard to affected part three times a week. It is perhaps needless for me to advise you to milk her very clean and to gently hand rub her udder.

Sore Throat.—I have ram lamb born February last, Oxford breed, weight about 100 lbs. fine flesh. Suddenly, considerable swelling appeared under throat. After a few days it seemed to gradually decrease; then in two days it was worse than ever. The lamb is growing thin, has poor appetite. H. L. P., Glen Moore, Pa.—Rub throat with camphorated oil once a day. Give five-drop doses of syrup iodide of iron 3 times a day, for a few days; then give the same quantity of Fowler's Solution, three times a day. Open bowels by giving either epsom salts or castor oil, if necessary.

Rubbers save doctor's bills and shoemaker's bills. But they are for wet weather only; your feet can't breathe properly thru rubber.

Are You Making It PAY?

A 400% Increase In This Cow's Yield

Your dairy profits depend on three things—yield of milk, the percentage of cream and the cost of your feed. Labor cost enters into it, but that is pretty well fixed. Cut your feeding costs. Get more milk. Read how Mr. Iliff increased the yield of a cow 400% with

Happy Cow Feed
24% Protein

Our New York representative has written us about the wonderful experience of Mr. Iliff, a feed dealer who has a large dairy herd. The letter is as follows:

"Mr. Iliff told me yesterday that on one of his farms he had a fine cow, with a new calf. On a ration made from brewers grains, gluten and wheat feeds with linseed meal, she gave 10 quarts of milk per day,

"She was then switched to "Blank's Dairy Feed" but showed no improvement. Then she was changed to another well known dairy feed without showing any increase. The herd manager suggested that she be sold as unprofitable.

"Mr. Iliff insisted on a trial for thirty days with Happy Cow Feed, gluten and ensilage. She was then fed a ration of three parts Happy Cow Feed, one part gluten and what ensilage she would eat. He soon brought the cow's production up to 40 quarts per day.

"This cow is now maintaining an average of 38 to 40 quarts per day with an average of 3.40% butter fat. I believe this is correct as a dealer does not usually go out of his way to boost a feed."—Name and address of Mr. Iliff furnished upon request.

This is just an example of the happy results obtained by feeding Happy Cow Feed. It is the most economical feed you can buy.

Happy Cow Feed is composed of cotton seed meal, corn feed meal, cocoanut meal, wheat bran, peanut oil meal, alfalfa meal and velvet bran feed. It is palatable and highly digestible—good for your cows.

A progressive dealer in your community may be able to supply you, but if there is no dealer in your town, write us for the name of the dealer nearest you.

HAPPY COW FEED

DEPT. 152

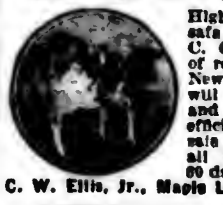
Edgar-Morgan Co., Memphis, Tenn.

60 Registered Holstein Friesians 60
York County Breeders Second Annual Sale at the Fair Grounds, Friday, October 8th, 1920, last day of Ye Grand Old York Fair. All over 6 Mo. Tuberculin tested. Plan to come to this great sale.
Send for catalog.
H. N. Forry, York, Pa.
S. N. Miller, Chambersburg, Pa.
Sale Committee

CONSIGNMENT SALE
of Registered and A. R. O. Holstein Friesian Cattle, Oct. 6 and 7, 1920, at the HORNLESS HOLSTEIN FARMS, Clarks Summit, Pa., 10 miles north of Scranton, Pa., on the D. L. & W. Railroad and the Northern Electric Railway. ABOUT 100 HEAD. MANY of them are sired by the BEST DAMMED BULL of the breed, a son of the WORLD'S RECORD SENIOR 4 YEAR OLD, KEYSTONE BEAUTY PLUM JOHANNA, with 25,787.5 lbs. of milk, 1204.7 lbs. of butter, strictly official in a year, 4% IN LONG TIME TEST. Daughters of cows with semi-official records from 600 lbs. of fat and up; sons of 30 lb. cows; son of a cow with 1050 lbs. in semi-official test. 100 or more animals from herds under Federal supervision. Some of the animals sold on a 60 day retest.
We have on hand a number of bulls and bull calves at private sale before October 1st. NATURALLY HORNLESS.—Geo. E. Stevenson, Clarks Summit, Pa.

STEVENS HOLSTEIN FARM
of Cortland, N. Y., offers pure bred cows and calves, all ages; also extra high grade Holstein heifer calves $20 each, express paid in lots of 5; 2 heifer calves with purebred bull calf $75. Grade Holstein cows in carload lots. Wire me to meet you.
PAUL H. STEVENS, Prop.

Registered and Grade Holsteins
Get busy you calf club promoters. I have 50 registered heifer calves, 3 to 10 months old, $100 each for the lot, choice $125.00. 200 registered and high grade cows, heifers and bulls. Car of any age that you want. ⅞-Holstein heifer calves, $20 each. Express paid in lots of 5.
J. C. Reagan, Tully, N. Y.

MAPLE LAWN HOLSTEINS

High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.
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We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred, healthy bulls, from a clean, Tuberculin Tested Herd at reasonable prices. King of the May—Dolly Dimple—Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees.
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WANTED A HOME
for choice registered and high grade Holstein-Friesian heifer and bull calves, $25 and up. Write us your wants. Browncroft Farms, Cortland Co. McGraw, N.Y.

We will give the use of a finely bred registered Holstein bull for 3 years to any responsible farmer. Write for our plan.
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Nine Reg. Guernsey Bulls, 1 to 10 mo. old. Sires, Langwater Foremost, Glen Gable Friendship, 3 sired by son of Glenwood's Buttercup, 769 lbs. fat at 3 years. H. B. SHENK, ELVERSON, PA.

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The herd has a strictly business atmosphere and they are bred for maximum production of milk and butterfat. If you admire the look of a producer, they will appeal to you as the premier show type. Our present offering is one choice bull calf from the best blood in the herd and backed by excellent records. Also a couple young cows and heifers. Herd tuberculin tested, no reactors. CRESTMONT FARM, 31 N. FOURTH ST., SUNBURY, PA.

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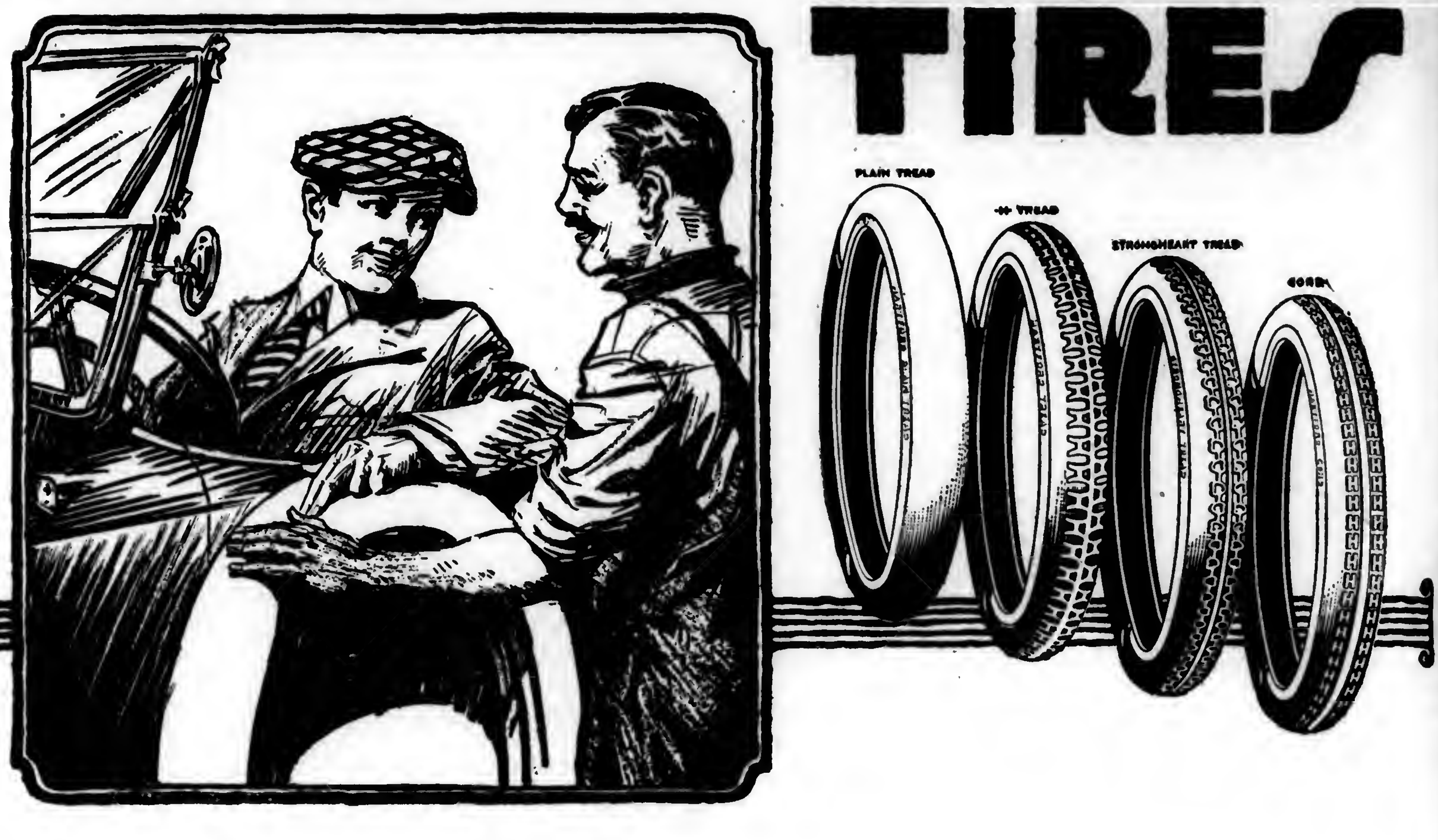
TIOGA COUNTY HOLSTEIN BREEDERS' ASSOCIATION

HARTFORD
TIRES



WHEN a car owner who uses Hartford Tires tells the whole story about their long life and economy, his friends are likely to be skeptical.

What they cannot understand is why there should be such a difference in tires.

To the man who has followed the Hartford policy since the beginning there is no mystery about it.

He knows the *unswerving Hartford adherence to quality.*

He knows that every Hartford Tire that is built — regardless of size or type — must be *as good as can be built* anywhere in the world, or else it cannot carry the Hartford name.

Far-seeing auto accessory and hardware merchants know it too.

And that is why you will always find Hartford Tires in the stores of the men who are thinking of the motorists' interests as well as of their own.

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PENNSYLVANIA
AGRICULTURE
THE KEYSTONE OF
NATIONAL PROSPERITY
FARMER
ESTABLISHED 1880
PUBLISHED WEEKLY

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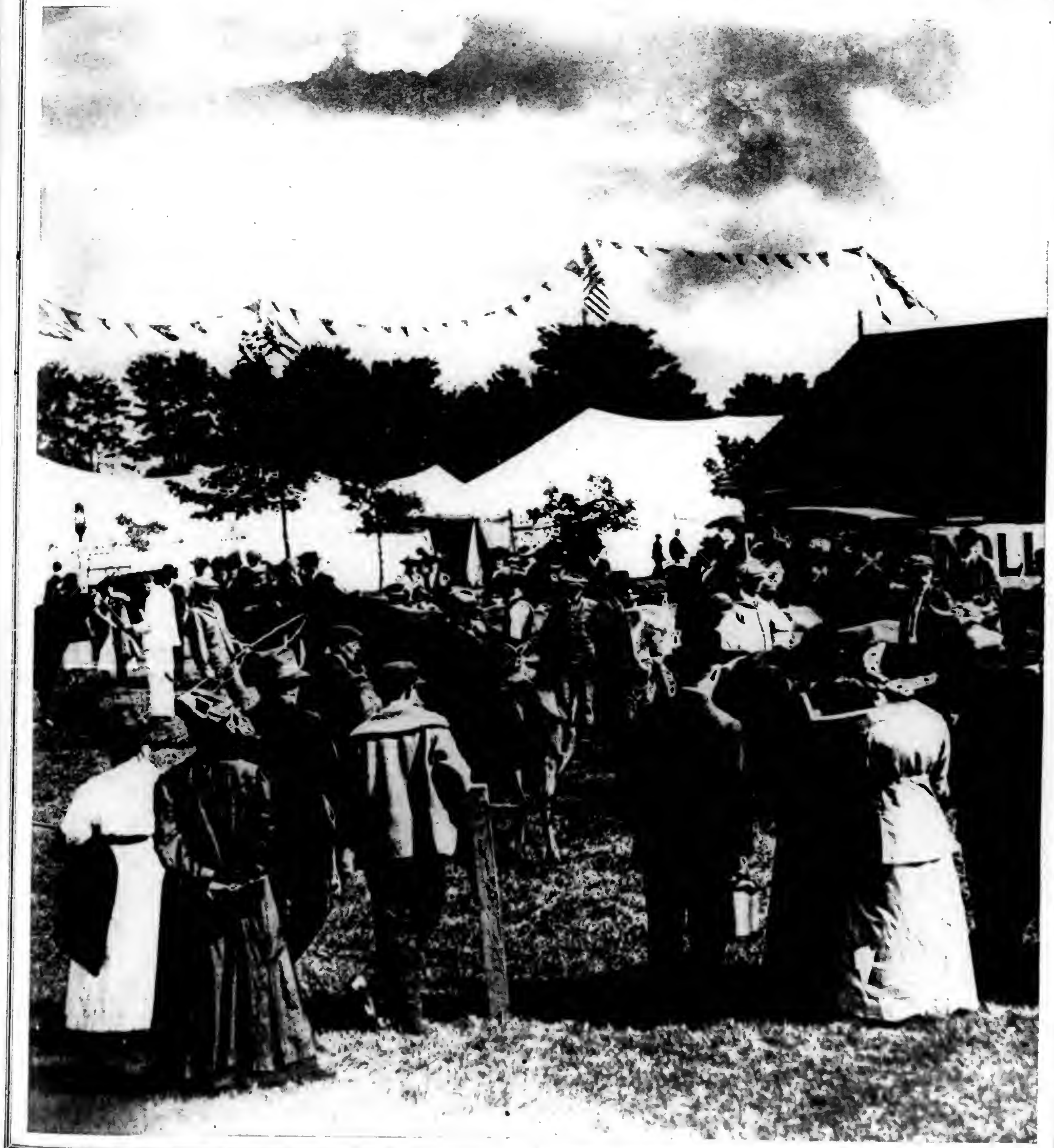
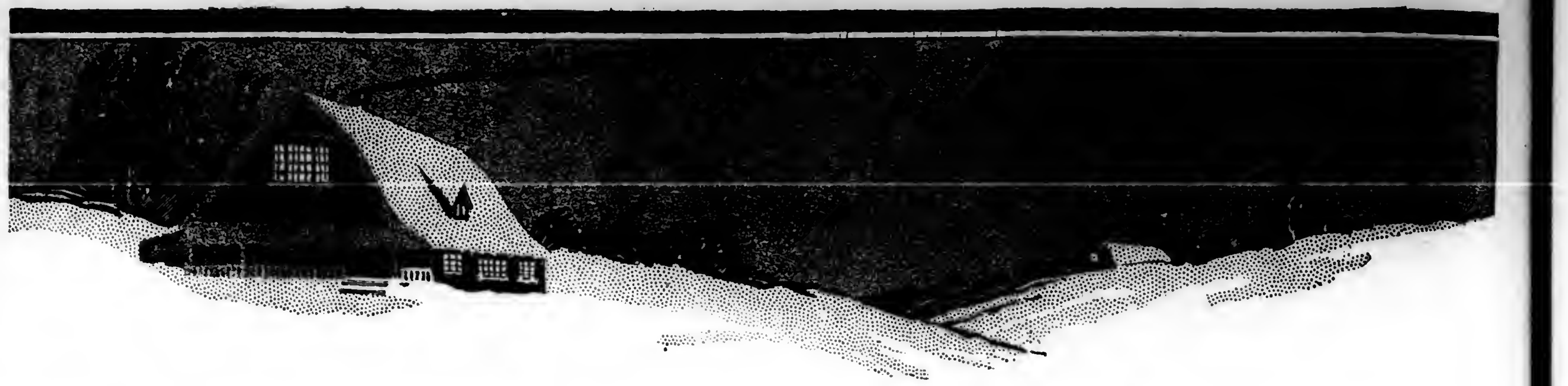
Number 14





October noons are warm enough---but we'll say October nights are chilly

WHEN the wild geese fly south, when the chopping of an axe in the quiet woodlot can be heard a long way off and the bright October days are warm only at noontime—then you know that winter's just around the corner, limbering up his muscles to have a bout with your heating system. Frosts and snow will come tumbling over the hills in earnest most any morning now. Take a warning from the chill in the air. Is your home going to be comfortably warm and cozy this winter?

No matter how intense the frosts, no matter how bitter the cold or how the wind blusters, an Andes System One Pipe Furnace will keep you warm and happy. It isn't too late, even now, to put one in, because an Andes can be put in complete in just one day. If you start putting it in this morning, say, why by tomorrow morning you can have a fire in it taking the chill off the house.

Because an Andes can be installed so easily, because there is no need of ripping open floors and walls to put in heating pipes, because the Andes saves from one-third to one-half on the fuel you used to burn, it is a mighty economical furnace, and it lasts for years.

We guarantee that if your Andes does not give perfect satisfaction it will be taken out just as soon as the weather permits and the full price returned to you.

Don't delay. All nature knows winter is coming and is taking pains to keep itself warm. Send in the coupon today and get the free book about the Andes.

GENTLEMEN:—We are heating our house of eleven rooms with one of your No. 240 One Pipe Furnaces. Every room is comfortable and we use much less coal than we ever did before.—GEORGE B. OTTO, Boiling Springs, Pa., March 11, 1919.

PHILLIPS & CLARK STOVE CO., Inc.
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Manufacturers also of the famous Andes Stoves and Ranges

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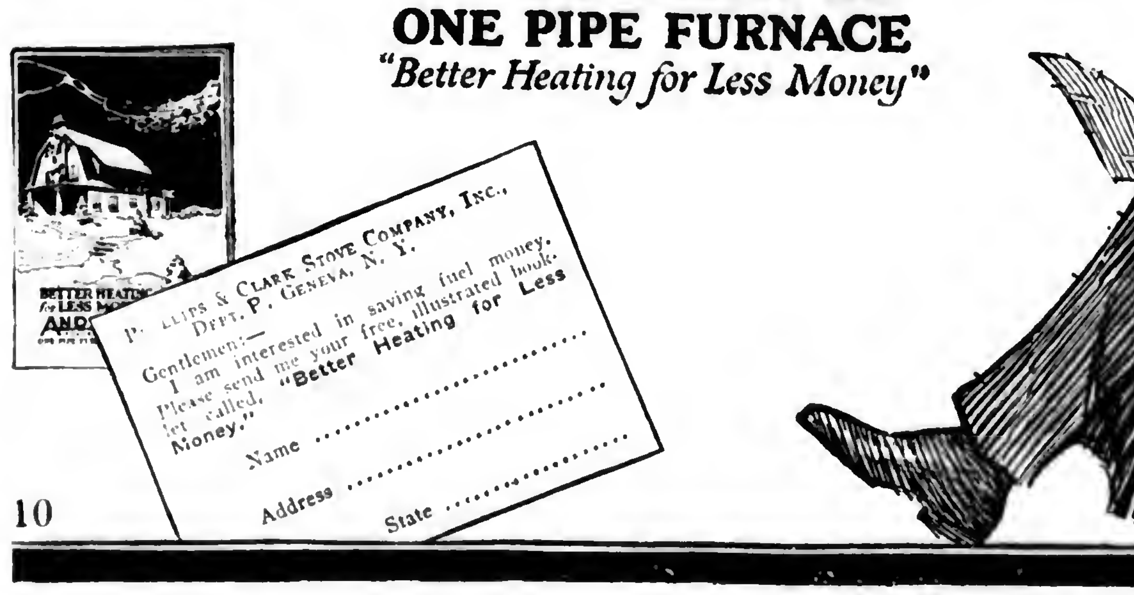

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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880 PUBLISHED WEEKLY

The Lawrence
Publishing Company
Philadelphia

Number 48 PHILADELPHIA, PA., SATURDAY, OCTOBER 2, 1920 Number 14

New York State Fair an Exposition

A Fair That Puts the State on the Map Agriculturally---By Elmer E. Reynolds

The New York State Fair held at Syracuse during the week ending September 18th, was the largest exhibition of the state's products, institutions and resources ever held. While agriculture was the predominating feature, the New York fair has outgrown the strictly agricultural show, and is more appropriately described as an exposition. It reflects all the diversified activities of New York state farming—dairying, live stock raising, fruit growing, dairying, gardening, poultry, pet stock, dogs, bees, and numberless other industries and products. This year the management evidently did its best to break all records in number, quality and variety of exhibits, demonstrations and other features, and it succeeded.

County Exhibits

The county exhibit idea has become more than a fad in New York state. Nearly all the exhibits from within the state, orchard and field crops and livestock, are exhibited by counties. This plan has stimulated a live interest between farmers of the different counties to have their own county win the largest number of ribbons. It is proving to be a very useful feature of the fair, having already much to develop interest in better farming.

Onondaga, with its 5,000 registered Holstein cows and 40,000 acres of alfalfa, won first prize in county exhibits. The counties were judged on correctness with which the agricultural industry of a county was typified, quality of exhibits, educational features, decorative ability and diversity of exhibits.

Fruit

New York's great fruit industry was never better represented. The apple exhibit was the largest and probably the best ever seen in the state. Ontario County carried off the first honors in fruit competition. Its exhibit included forty-two varieties of plums. The barrel apple exhibits were unusually fine, and many apples were shown in bushel baskets, and plums in kegs. The Geneva exhibit of apples and plums from its own orchards was very large. Much of the fruit was offered for sale the last day.

Grand Champion Berkshire Boar at Ohio State Fair

View at Ohio State Fair. Note the Artistic, Substantial Buildings

Dairy and Beef Cattle

Competition in the dairy and beef cattle classes was strong. The Holstein-Friesian exhibit included fourteen herds and many prize winning individual animals. Nine counties competed for the cup offered by the Holstein-Friesian Association of America for the champion county Holstein herd. The Ayrshires were of such excellent quality that a government representative who is aiding foreign missions to this country to secure cattle to replenish those lost in the war, said he had never seen finer animals in any part of the country. The Guernseys and Jerseys were close competitors in numbers and quality. There were 178 entries in the Aberdeen Angus classes. Carpenter and Ross of Ohio led with three firsts and senior and grand champion bull. Woodcote Stock Farm of Michigan took four firsts and J. S. Caldwell of Ohio three firsts. There was a larger showing of Herefords and Shorthorns than has been seen in New York state in several years.

The Sheep Industry

Inquiries among the sheep men disclosed the information that many farmers are reducing their sheep flocks, and some others have sold their entire flocks and gone out of the sheep business during the past five months. Apparently, however, there was just as much interest displayed in sheep at this year's fair as in former years. Seven Shropshire flocks eight Hampshire flocks, four Cotswold flocks, four Oxford, six Lincoln and three Merino flocks, in addition to two or three flocks, each of several other breeds were in competition, with a very large number of fine animals. The American Karakul Company of Onondaga County also made a large exhibit of their Persian sheep.

Advertising Wool

New York State sheep raisers are promoting an aggressive campaign for the French truth in fabric bill. They had a large line of exhibits demonstrating the difference between pure virgin woolen fabrics and so-called "all-wool" fabrics made largely of shoddy, and emphasizing the necessity for a law compelling the marking of fabrics and garments to show their actual content of virgin wool and shoddy.

An exhibition of old time home spinning, carding and weaving, was given every day during the fair, which drew a large crowd at all times. Wool shorn from sheep on the grounds was carded, spun, reeled and woven into natural uncolored cloth, by two women, with hand spinning wheel, reel and loom, which in turn was made into a handsome suit of gray and presented to the lieutenant-governor, in less than six days.

Swine

The Duroc-Jerseys and Berkshires led the swine exhibit, while the Poland-Chinas, Chester Whites, Large Yorkshires, Hampshire and other popular breeds in the state were well represented. New York does not compare with the Middle West states in swine production, nevertheless there are a large number of progressive swine breeders in the state who are leaders in quality production.

Horses

The farm, breeding and draft horse show resembled more closely the Middle West draft horse show of a few years ago than in any former year. And the big Percherons and Belgians were mostly exhibited by breeders of New York and other Eastern states. Judging from its appearance, it would seem that the draft horse breeding industry was moving to the east. Only a few years ago the draft horse show at the New York State fair was composed of large strings of horses from the Middle West breeding farms. Two or three state owned stallions might be seen, but rarely a Percheron or Belgian mare. In fact there were few owned in the state. Now there are many fine mares of these breeds in New York, and the rapid advancement in the use of tractors and motor trucks does not seem to effect the development of the draft horse breeding industry in this part of the country.

Grand Champion Berkshire Sow at Ohio State Fair

(Continued on Page Four)

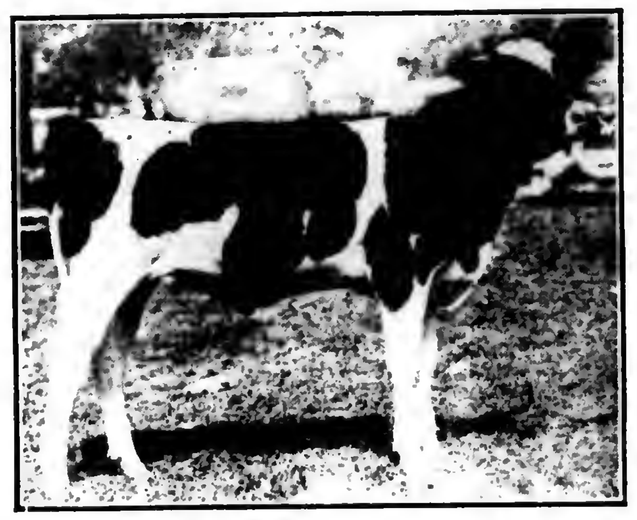
Poultry

The New York State fair poultry show has long been a leader among the fall shows. This year there were 2674 entries in the poultry classes, including fowls, geese, ducks and turkeys. New York is a great poultry State, and following its usual custom the Cornell University Department of Poultry Husbandry made a large exhibit of poultry appliances, including its most recent poultry house developments, fully equipped for maximum egg production along Cornell lines.

The Cornell poultry specialists are pioneers in artificial illumination to promote winter eggs production. As the domestic fowls originated in the tropics where the nights and days are of equal length, their reproductive and digestive systems are developed to fit the environment of the 12-hour day. Therefore the hen must be wound up about every twelve hours. In the winter time in the north her stomach strikes at about three o'clock in the morning, when the lights should be turned on and the feed provided. "Get eggs," they say, "when the getting is good. Why board unproductive hens all winter just for the sake of their society?"

Farm Machinery

The machinery exhibit showed the changes that are constantly taking place on the farm in the use of mechanical aids. Farm power machinery has crowded out most of the horse-drawn implements. Motor propelled implements and tractors were far in the lead. Farmers showed great interest in motor trucks and the long line of tractors. Many are installing or preparing to install farm electric lighting plants and other modern home equipment, and if the fair sales reported can be taken as an index it may be safely predicted that within a few years very many New York State farm homes will be as well equipped with sanitary plumbing, electric light and machinery, as the city homes of today.



Grand Champion Bull Calf at Ohio State Fair

Home Bureau and Club Work

The home bureau and children's club work has become a leading feature of the state fair. It is receiving more attention than any other rural uplift project. The farm folks realize that the boys and girls are the most valuable farm crop, and deserve the best possible training. New York State now has 20,659 members enrolled in Boys and Girls' clubs. This is 27 percent of the total enrollment in eight eastern states. Pennsylvania has an enrollment of 4,876 boys and girls in these clubs. This work in the east is being carried on under the direction of Milton Danziger of the United States Department of Agriculture. The value of products produced by the boys and girls clubs in New York state last year was $223,355; Pennsylvania, $75,108. In New York state there are sixteen club agents giving their full time to the work.

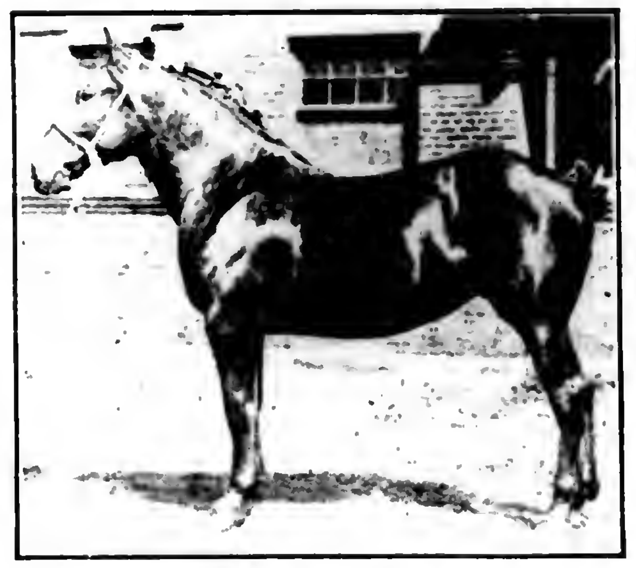
Fifty boys and girls, each selected, thru elimination contests in different parts of the state, every day during the fair conducted demonstrations of the things they are learning thru junior project work. These included gardening, corn growing, milk testing, bread making, garment making, canning, potato growing, poultry and pig raising and other farm activities. The boys and girls brought their own animals and each of the seventeen counties carrying on junior project work had exhibits. An old fashioned spelling bee was held in which fifty-five children participated. One boy spelled 180 words correctly and won the prize. Folk dances were given by foreign born young folks for the entertainment of the fair visitors.

A county theatre, presenting a group of five one-act plays, given by the Cornell Dramatic Club, is an original New York state fair attraction. Its object is to give a practical demonstration in dramatics for schools, granges, churches and community centers. It is intended to show what can be done by a group of amateurs, who have interest in their work but practically no training, and who use only such simple facilities and equipment as any community can provide in its school, village hall, or a barn. This feature was first staged last year, and as a result, it is said, rural dramatic organizations are springing up in many communities and doing definite work for their neighborhoods. The state college of agriculture believes that New York should not only be a leader in country drama work, but that in doing so it will perhaps be a greater gainer than any other state by encouraging a well rounded development of this country life activity. Several performances were also given daily in community singing, educational movies and the like.

A 12-year-old Calf Club Girl Walked 12 Miles to Ohio State Fair

Grange Day

Grange day was the big event of the fair. It drew a record smashing attendance of farm folks from all sections. The meeting in the large Grange building was opened with an address by Lieutenant Walker in which he pointed out the need of greater co-operation between all agencies in order to put farming on a more profitable and satisfactory basis. John F. McSparran, master of the Pennsylvania State Grange, emphasized the need of more efficient organization for farmers for the purpose of obtaining by its power the things they must have to solve the serious problems confronting them.



First Prize Filly at Ohio State Fair

At a meeting of farm leaders held during the fair, Roswell D. Cooper, president of the Dairymen's League, spoke of the critical situation confronting dairymen in the state. He declared that farmers were being asked to pay for losses being sustained by gamblers in sugar. He said the manufacturers of condensed and evaporated milk were planning to shut down their plants October 1 for at least three months, throwing onto the market daily 350,000 pounds of milk. There has been gambling in sugar and as a result holders of condensed milk must stand a loss. Mr. Cooper said, however, that "the Dairymen's League is not too proud to fight."

Master S. J. Lowell of the National Grange, argued for a better understanding between producer and consumer. Some time ago there went out this statement in labor circles: "Get all you can while the getting is good" and there were 1,300 strikes in this country at one time, said Mr. Lowell. He spoke of the injustice of price fixing on the farmers crops for the benefit of the city laboring men, and "now we are asked to be taxed to build tenements to house the people who left us for the city. The farmer is beginning to grow restive. They have never issued a fiat, but they must have something more than cost of production."

CAN HE START FARMING?

What chances has a young couple to start farming? How should they start? I would like to see these questions discussed in the Pennsylvania Farmer.

I have the dearest girl in the state. A flivver and one thousand dollars in cash. I am thirty years of age and was born and raised on the farm. I like farm work. I am a son of a well known, successful farmer who pays an income tax on a less than 200-acre farm.

What are my chances to start farming for myself, and how should I start?

There are two or three ways open to me: First, rent on the shares, let the landlord furnish everything, teams, implements and seed. I do the work and furnish all help needed and market the crops for one-third.

Champion Cheviot Ewe Ohio State Fair

Second, rent for the half, furnish teams, implements and half of seed. Third, rent for money and finally, buy—provided I can—by putting a mortgage on the farm.

Let us hear from those who have have had some experience and know how the chances are compared with those of 22 years ago. Also, compare farming with other opportunities open to me in the city, considering that I am educated as a farmer.—A Reader.

Note.—We shall be glad to receive and publish any helpful advice our readers can give this young ambitious farmer.—Editor.

GRADE YOUR WHEAT TO SECURE BEST PRICES

Grade your wheat if you would receive the best possible market price for it.

The United States grain standards are the basis upon which all wheat shipped interstate is handled and sold, and is the basis upon which grain prices are quoted at the large centers.

The farmer who does not ship his wheat from the state, but depends upon the markets near his farm, thru the proper grading of his grain, is able to discuss intelligently selling prices with his miller or grain dealer, by simply consulting the market quotations on standard grades of wheat from the large centers. The farmer who simply offers his grain as ungraded, must take a chance on securing the market price for his product.

Bulbs for next spring's flowers should be ordered by now.

Soils and Fertilizers

Conducted by Dr. J. G. Lipman

Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

WHAT FERTILIZERS SHALL WE USE FOR LEGUMES?

It has been assumed that in fertilizing crops like alfalfa, clover, soy beans, cow peas, etc., the use of nitrogen is not necessary. It is argued that these crops are able to obtain all the nitrogen they need from the air with the aid of bacteria in their roots. Hence, as long as legumes are properly inoculated, no nitrogenous fertilizers should be necessary. As opposed to this view there is a considerable amount of propaganda by commercial organizations in favor of the use of nitrogenous fertilizers for legumes, and particularly for lima beans, garden peas and alfalfa.

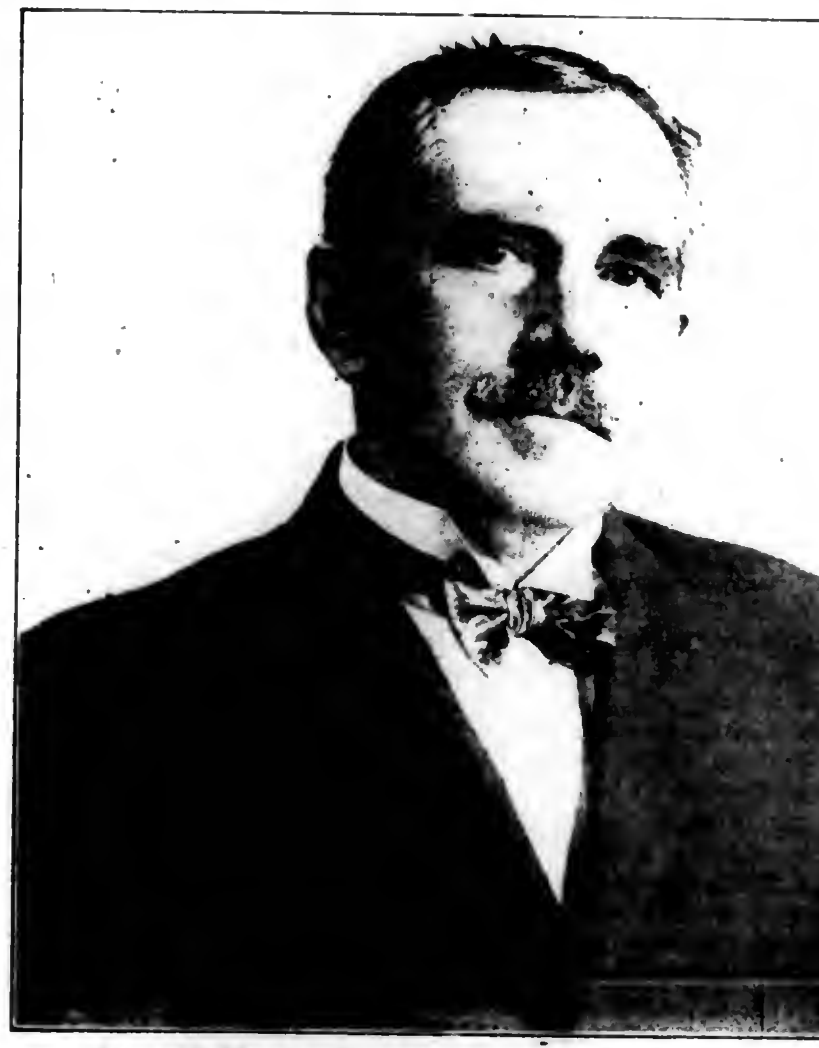
There is some basis for such claims, even tho the claims themselves are too broad. It is true that for garden crops like lima beans and peas, planted early in the season and grown under intensive conditions, small applications of nitrate of soda or of other readily available nitrogenous fertilizers are likely to be profitable. In the case of alfalfa, there are exceptional conditions where a small quantity of nitrate of soda applied at the time of seeding would so stimulate the plants as to assure the farmer of a better stand and a better yield during at least the first season.

When alfalfa is grown for the first time the artificial inoculation provided for by means of inoculated soil or by means of commercial cultures may at times be somewhat too slow to give the crop a suitable start. However, this is more likely to be the case in regions where alfalfa is sown in the spring. But where alfalfa is sown in August or September the period of summer following which precedes the sowing of the alfalfa is sufficient for developing enough nitrates in the soil to give the crop a satisfactory start, even tho alfalfa had not been grown on that field before.

It has been demonstrated very clearly that alfalfa, like other legumes, will take up the nitrates already present in the soil. If large enough quantities of nitrates are present or are applied, there is a concentration of nitrates in the juices of the roots of the young plants, and this accumulation of nitrates will discourage the formation of nodules and the gathering of nitrogen from the atmosphere. To put it in other words, legumes can grow very well without nodules and nodule bacteria provided the soil is rich enough in nitrates. But, since it is the aim of the farmer in growing legumes to obtain nitrogen from the air in order that the cost of fertilization may be decreased, it is evident that, beyond a certain point, the addition of nitrogenous fertilizers for such crops is a waste. It can be readily demonstrated in the laboratory that alfalfa roots, immersed in a nitrate solution, will fail to produce nodules even tho the bacteria are present, whereas roots of the same plant immersed in a suitable fertilizer solution containing no nitrates will readily develop nodules when bacteria are present.

Assuming then that the use of nitrogenous fertilizer is usually unnecessary for legumes grown under field conditions, the question arises as to the use of other fertilizers. In answer to this question it may be stated safely that with most soils the use of materials containing available phosphoric acid should prove profitable. Fertilizers like acid phosphate, basic slag, bone meal or other carriers of phosphorus give results as indicated by the greater vigor of the plants, their darker green color, greater resistance to disease, etc. Ordinarily, applications of 300 to 400 pounds of acid phosphate to the acre for alfalfa or clover should be sufficient. For sandy loams and sandy soils applications of as much as 500 pounds of acid phosphate to the acre are often more profitable than the smaller applications. For the soils of the latter type fertilizers containing phosphorous may in themselves prove inadequate for best results. Phosphatic fertilizers should be accompanied in this case by potash fertilizers, such as muriate of potash, double manure salts, kainit, wood ashes, etc. At times as much as 100 or 150 pounds of muriate of potash to the acre would give profitable returns on soils of lighter texture and receiving an annual rainfall of 35 to 50 inches. In the case of the heavier soils the use of potash may also be justified in amounts from 25 to 75 pounds of muriate of potash to the acre when such soils have been under cultivation for 50 years or more and have become somewhat depleted in humus.

It might not be amiss to point out also that sulfur is one of the essential constituents of plant food. Ordinarily, the soil and the atmosphere will supply the needs of the average crop. In the case of alfalfa and other legumes, however, the sulfur requirements are relatively high and, where heavy yields are expected, the use of sulfur-carrying materials is of great advantage. Where acid phosphate is employed provision is automatically made for supplying sulfur, since acid phosphate contains a large proportion of sulfate of lime or gypsum. On the other hand, where bone meal, basic slag or ground phosphate rock are used as a source of phosphorus, the addition of gypsum or of ground sulfur would stimulate growth and make for larger crops than would be possible where sulfur is not otherwise provided.



Charles F. Marvin, Chief of the U. S. Weather Bureau

THOSE WHO SERVE US

First in importance of the work of the Weather Bureau of which Charles F. Marvin is chief is the Forecasting Division, which receives and charts twice daily telegraphic reports of prevailing weather changes. In the case of severe disturbances, warnings are issued along the lakes and sea coasts. The frost and cold wave warnings are invaluable to many interests, including the trucker and fruit grower, especially in the spring when tender vegetation needs protection.

The aim of the Weather Bureau has been to serve wherever its facilities and a special need makes service practicable. The variety of special uses of the storm warnings illustrate another phase of the practical value of the forecasters' service. In advance of a predicted storm, rice plants flood their crops to prevent the straw being broken by the winds. Agents of marine insurance companies stop insuring cargoes after a storm has been predicted. Fishermen take steps to protect their boats and nets. Lumbermen make their standing booms secure and regulate their log towing. At lake ports vessels load hurriedly if they can get off two to five hours in advance of off-shore winds. If snow is expected shippers must start 17 to 18 hours in advance.

Not only on the farms and on the water is the service of the Weather Bureau invaluable, but cities also are constantly dependent upon it. With notice of an approaching cold wave greenhouses are closed and their boilers fired. Preparations are made at once by heating and lighting plants in all cities, whether gas, electric, steam or hot water. Fire plugs, exposed mains, and general plumbing are protected. Large stockyards drain their machines. Gasoline engines are drained. Work in concrete is stopped. Street railway companies arrange for more heat in their cars. Natural gas companies turn a larger amount of gas into their lines to provide for increased consumption. Dredging of sand and gravel ceases, and iron ore in piles for shipment is placed in the holds of vessels to prevent the wet mass from freezing.

The Division of Agricultural Meteorology, another branch of the bureau, supervises the work of about 400 special observers maintained in connection with the corn, wheat, cotton, sugar, rice, tobacco, fruit, and other industries. It has charge of the distribution of the special warnings issued for the benefit of certain crops and publishes data showing weather conditions thruout the country and the effect of these conditions on certain important crops.

When a new industry is proposed for a certain section of the country or the introduction of a plant new to a region is contemplated, a history of the climate of that region is most important. Information of this character regarding every section of the country is compiled by the Climatological Division of the bureau. It has supervision of about 4200 co-operators and about 42 special stations. From these are collected records of daily observations of temperature, rainfall, etc., forming the basis of a climate history of the utmost importance to future agricultural and industrial development.

The bureau maintains thruout the United States, in the West Indies, Alaska, and Hawaii about 200 meteorological stations employing from 1 to 15 persons especially trained in gathering data on which the forecasters, located at five points in the United States, base their daily predictions which combined cover the entire country.

MAINTAIN SUPPLY OF HUMUS

The gradual loss of humus by cultivation and the failure of the farmer or gardener to restore it to the soil is the chief cause of run-down farms and gardens, say the gardeners at the State College at Ithaca. Humus is dead and partly decayed plants.

If one can give his garden a good dressing of stable manure every year, the humus supply will be well maintained., but in many places stable manure is hard to obtain and other sources of humus must be sought.

A compost heap is a good source of humus. It is made by piling up leaves, lawn clippings and other vegetable materials with lime between the layers. It will require a year or two before the material is sufficiently decomposed to be worked into the garden soil.

Leaf mold, which is black surface soil from the woods, is a natural compost. Since it tends to make the soil sour, the garden should be limed later. One pound of lime to every thirty square feet is about the average rate of application.

Growing rye in the garden also restores humus. It may be sown whenever a part of the garden space is left vacant by the harvesting of a crop and even between widely-spaced rows like those of corn, tomatoes, etc., while the crops are still growing. When the rye is plowed or spaded under the following spring a considerable amount of humus results.

Don't let your car go to the county fair with an empty seat. Invite someone to go with you who might otherwise miss out.

PENNSYLVANIA FARMER
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PHILADELPHIA, PA., OCTOBER 2, 1920

VOLUME 48 NUMBER 14

Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Additional Arguments

ADDITIONAL arguments in favor of establishin a state fair in Pennsylvania will be found in the report of the splendid New York State Fair in our first article this week and also in the pictures taken at Ohio State Fair on pages 3, 4 and 21. We call the special attention of Pennsylvania farmers who have never seen a big agricultural fair to these features and ask them after studying them carefully to re-read our editorial on this subject last week. Now, honestly, don't you think the agricultural interests of the state are big enough and important enough to deserve the same attention that other states give their farmers? There is no other institution that will so effectively advertise agriculture and its products as a properly conducted state fair, and it is a kind of advertising that will benefit farmers politically, socially and economically.

Guard the Farm Loan Law

EFFORTS are being made by interested parties to bring about the crippling and possibly the repeal of the Federal Farm Loan Act at the next session of Congress. It has not been functioning for several months due to an injunction and an appeal to the Supreme Court where it will be heard in October. The question at issue is the constitutionality of the tax exemption feature of farm loan bonds.

Since the law was enacted 3,985 Farm Loan Associations have been organized, or an average of more than one to every county in the United States. The loans made up to the present time aggregate about $360,000,000. The stock originally subscribed by the government is being rapidly reduced, about one-fourth of the sum having been repaid. The secretary of the Associated Farm Mortgage Bankers has been flooding the country with arguments against the tax exemption feature, according to Mr. Flannigan in a recent address at Columbus, and it was thru his activities that the banks were compelled to suspend.

The Farm Mortgage Bankers' Association argues that the interest charge should not be fixed at 6 per cent, claiming that competition properly adjust the rate. That this is not correct is conclusively proven by the history of half a century which shows the average rate of farm mortgages in the United States prior to the enactment of the Farm Loan Law, was about 7½ per cent—running from 5.3 per cent in New Hampshire to 10 per cent in many sections of the country.

Farm credits is a vital matter in agriculture and every farmer, whether he personally borrows money or not, is affected adversely by lack of adequate credit systems and should use his personal and political influence to have proper legislation enacted. Every old-line, money-lending power will use its influence to prevent what they call "special legislation" for farmers on this subject, and they have a number of representatives in Congress who will do their bidding. The Federal Farm Loan Law only gives to farmers borrowing privileges suited to the needs of farming, which needs are not adequately met by credit systems created for other lines of business.

The Business Prospects

ONE OF THE interesting items of news published last week was the "Survey of National Conditions" which was gathered and prepared for a financial institution in Baltimore by Franklin K. Lane, formerly Secretary of Interior. The information was gathered by 900 field representatives from every part of the United States and is in the form of answers to a questionaire on industry, agriculture, finance and politics. Mr. Lane is a recognized student of economics which makes the report and his comments of more than ordinary value.

Mr. Lane finds that the United States is today "better off than any other country in the world." There is no forced idleness, there is plenty of raw material, transportation is improving rapidly and there is plenty of money for essential buying. The discouraging factors mentioned are coal shortage, and the failure of labor to increase its individual productivity. He says: "Altho labor is costing more than it did last year, it apparently is producing no more." The lack of housing and the resulting inconvenience is found to be a serious drawback in industrial centers.

On the whole, the report indicates an essential soundness in business with no alarming factors which wise handling will not remedy. While there are serious problems demanding solution, the present political campaign promises little so far in the way speedy remedy. Altho Mr. Lane is a well-known Democrat he finds that there has been a trend so far towards the Republican ticket.

Prices Going Down

ALL SIGNS point to a lower level in prices. The manufacturers of cotton goods and also the large woolen concerns have slashed prices considerably in starting their mills for the season. Some wholesale houses and big stores have reduced their prices, even on goods already in stock. Clothing dealers, however, are determined to hold their prices up as long as possible in spite of the evidently unwarranted prices. The same measures which forced reduction in other lines—reduced buying—will also bring down the price of clothing in a short time. When the low quality of cloth used during the past few years is considered, together with the fact that during this time shoddy has displaced a billion pounds of wool, for which there is yet no market, clothing men will have hard work convincing the public that their prices should stay up.

It is probable that prices will continue downward even to a point below what are prices in many instances; but there will no doubt be a reaction to a level that is warranted by productions costs and the market. When prices are going up it is human nature to scramble to get goods before they go higher. On the other hand, when prices are going down the public holds off, thinking they will go still lower. In this way the pendulum swings until it finds its resting point.

The unknown factor in the problem is the buying power of Europe. Its great need is food and raw material. Already the foreign demand for wheat is creating a bullish tendency on our markets and it is impossible to say what the price may ultimately be. Gradually the tendency to profiteer in all lines is lessening as production catches up with demand, and this will prove to be one great factor in lowering prices. Another will be the potential willingness of labor to do fair work as an equivalent for big pay.

A Shortsighted Policy

HON. CHARLES E. HUGHES, ex-Governor of New York, and ex-Judge of the Supreme Court, cannot by any stretch of the imagination be charged with being a Socialist, either actively or sympathetically. For this reason his denunciation of the New York Legislature for ousting the duly elected Socialist members of the Legislature is timely and should be seconded by every true American. When any body of lawmakers, or any public official, so far forgets the spirit of America as to autocratically deny the exercise of guaranteed rights of sovereign citizens it is time they be unseated and replaced by men who understand what the American spirit is.

We hold no brief for Socialists, but we do resent encroachment upon the principles of civil and religious liberty which lie at the foundation of our government. When a few men of questionable political leniage can deny representation to 170,000 people, as was done in this case, it is time to inquire as to the trend of government. We spent thousands of lives and billions of money to help end autocracy in the world and we can not afford to wink at the appearance of its head in this country. Assuming that the Socialist's theory is foolish and impractical, no better scheme can be devised for spreading it and increasing its adherents than to deny to them their guaranteed rights, or to make martyrs out of its followers.

Our Washington Letter

Representatives of the farm organizations maintaining Washington headquarters, are holding conferences for the purpose of formulating a definite agreement and line of action to be followed in regard to packer legislation. They all are agreed that something must be done to regulate the packing industry for the benefit of producers and consumers, but there is a difference of opinion as to methods of solving the problem.

The Farmers' National Council has presented a plan which would place the packers directly under the supervision and orders of a Federal food commission, but representatives of the other farm organizations are not inclined to give their indorsement to this proposition. Dr. T. C. Atkeson, Washington representative of the National Grange, favors rigid government inspection of meats and packing plants to protect the public. He believes that the Federal Government should guarantee to everybody who wishes to engage in the business of meat packing equal opportunities and privileges; that the railroads own the refrigerator cars and stock yards, and be compelled to furnish these facilities on equal terms to large and small plants, removing all discriminating factors between producers, packers and consumers.

All the farm organization representatives have voiced their opposition to the packers' proposition to transfer the stock yards to a "dummy" holding company, and will send a protest to Attorney General Palmer against a transfer of the stock yards in any such manner. This is in line with the demand for rejection of the "big five" packers' scheme, made by the Federal Trade Commission in a report to the Attorney General. The packers' plan, which provides for the sale of the stock yards in fifteen cities to F. H. Prince & Company of Boston, was opposed by the commission on the grounds that it would enable the packers to increase rather than diminish their control of the stock yards. The object of the government litigation would not be accomplished by the packers' plan. According to the commission the fifteen stock yards, included in the scheme, handle 73 per cent of all live stock received at all the yards in the country.

* * *

Indicating a tendency towards a slackening in industry, the Department of Labor's Bureau of Labor statistics reports in its industrial survey that ten out of a total of fourteen representatives industries showed a decrease in the number of employees on the pay roll in August as compared with July. The number of employes in the automobile manufacturing industry decreased ten per cetn during this period. The same report also shows that twenty-seven of the forty-three articles of food consumed in the American homes decreased in price between July 15 and August 15. The retail price of potatoes fell 44 per cent and the price of cabbage went down 41 per cent. The drop in sugar was 14 per cent and most kinds of meat decreased in price.

* * *

Several leading national farm organizations represented in Washington, such as the American Farm Bureal Federation, National Board of Farm Organizations and National Grange, are doing effective work in the interests of farmers, and their representatives are men of high standing in Congress and administration circles. They are deserving of the support of every farmer. It is also true and quite generally understood by those who are familiar with the situation, that there are other organizations here claiming to represent the farmers, composed largely of a few self-appointed leaders, who are persistently meddling with almost every proposed measure in which farmers are directly interested that comes before Congress, and they manage to get their names prominently mentioned in the daily papers as the representatives of "tens of millions" of farmers. The "All-American Farmer-Labor Co-operative Commission" is one of a large number of so-called farmer organizations making strenuous efforts to

force itself into the front line of public attention. I am unable to connect this organization with the Farmer-Labor party, altho the name has a familiar sound and its demands are mostly along the same lines. These organizations may be supported by a following of farmers, as they claim. If so, their farmer followers are not only wasting their good money, but actually hindering the enactment of practicable farm legislation by aiding in the promotion of a lot of crazy schemes and visionary propositions which lack the remotest possibility of ever becoming laws.

* * *

Reports that are being received in Washington indicate that the farmers all over the country are becoming thoroughly aroused to the need for the early passage of the French truth in fabric bill. In New York, Ohio and other Eastern states where the sheep raisers are organized in county and state wool growers' associations, the merits of the bill have been conspicuously advertised at the fairs. While there are several other branding bills before the Congressional committees, the leading wool growers have decided to make their fight for the French bill, and are urging all farm organization representatives to confine their efforts to pushing this bill. If there is a member of Congress who has not heard of the French truth in fabric bill, it is probable that there are no live, progressive wool growers in his district.

* * *

The American Farm Bureau Federation Washington office is making considerable progress with its arrangements for developing the custom manufacturing of woolen blankets and suitings. The replies from woolen manufacturers are favorable to this proposition, indicating that if they can secure enough raw wool to make it worth while they will be willing to work it up for the farmers into yarns, blankets and fabrics of various kinds, on a custom or toll basis. As the farm folks are consumers of wool to the extent of two-thirds of the total wool production of the country, it will be seen that a general movement of this kind would not only give the farm folks a supply of woolen goods at cost of production, but relieve the market of a vast quantity of wool. It is suggested that county associations and state federations of wool producers that are pooling wool, could make arrangements with a woolen mill to manufacture a part of the wool in the pool for the members to the advantage of both producer and manufacturer.

* * *

The digest of the Democratic and Republican platform in parallel columns with the fourteen planks of the American Farm Bureau Federation, together with a summary of pending agricultural legislation, sent out to the State farm bureaus by Gray Silver, Washington representative of the federation, is receiving much attention from farm leaders and the farm press. It is explained by Mr. Silver that this is a strictly non-partisan, though political, educational activity undertaken now for the first time by organized agriculture. It is intended to give the platforms as they relate to agriculture side by side, without comment or partisan bias, allowing the reader to make his own interpretations. The outline of pending legislation of special interest to the farmers gives them a comprehensive idea of the bills to be acted upon during the coming session of Congress, and will enable them to vote intelligently for Congressmen and Senators.—Elmer E. Reynolds.

HARRISBURG LETTER

This is Forest Protection Week. In his recent proclamation designating the period between September 26th and October 2nd as the time for all citizens of the state to take action for the prevention and suppression of forest fires, Governor Sproul declared, "it is our duty to protect and restore to production the million of acres now barren because of forest fires."

Gifford Pinchot, the state's chief forester, estimates the annual damage to Pennsylvania's forests from forest fires at $100,000,000. Today he issued the following statement on, "why we must fight fire:"

It is not what forest fires consume that make them such a terrible curse to the state, because there is very little large timber left to burn. It is what the fires keep from growing that measures the damage.

The state is building fire observation towers, extending its fire-fighting organization, and its system of fire patrol just as rapidly as the appropriations to the Department of Forestry will permit. But the Department has had the meagre sum of four and one-half mills per acre with which to fight fire. It should have at least that many cents per acre, to make and keep Pennsylvania's forests safe against fire.

The sweep of fire over a forest means the killing-off of the young growth and the consequent holding back from production of timber.

Pennsylvania's forests would be restored without resorting to tree planting if the fires could be stopped.

Putting an end to fires is the duty of the Commonwealth not alone on the lands it owns, but upon all forest lands.

Ninety-nine percent of the forest fires that occur in Pennsylvania are preventable. Only a few are caused by lightning and they are usually small in extent. The others originate thru human action.

Because forest fires are preventable, it is the duty of the state to see that they are prevented. Not alone must the malicious incendiary be discovered and strongly dealt with, but the careless proprietor of forest property must be compelled to keep the fire menace away from his woods.

Agencies which operate in or near the forests must be told how to prevent fires. Campers who are careless have caused millions of dollars of loss to the state.

The largest percentage of forest fires of known cause come from the operation of railroads. We cannot stop the railroads, but we can prevent the fires. All the railroads in Pennsylvania have agreed to burn and maintain 100-foot fire strips on either side of their tracks thru wooded areas.

Lumber operations are responsible for a very small percentage of forest fires. Spark arresting devices are used in practically all lumber camps.

But brush left in the wake of a lumbering operation presents a menace. The state should have every weapon possible at hand to prevent fires and to stop those that do start.

NEW YORK LETTER

Milk Developments.—The dairymen of the east face the biggest crisis in their experience with the dealers refusing to pay the price demanded; $3.85 per 100 pounds of 3 percent milk, or 12c below cost of production and all manufacturers of milk products suspending business for a period of at least three months. This is regarded as a concerted move intended to let manufacturers of milk products unload the stocks of goods made when sugar was high at a high price, taking the toll out of the farmer as usual. This will protect manufacturers of milk products and the manipulators of sugar, but will ruin the market for milk. Following the advice of the League the organized milk counties are agreeing to allow the proceeds of all liquid milk sold to go into a pool, the producers of milk for factories to share in these proceeds pro rata. A large number of the liquid milk producing counties have agreed to this, and others are following the example. It is expected that many of the shipping stations will close and that the farmer owned plants of the state will be forced to take care of a large share the liquid milk sold.

Swine Notes.—Ohio breeders of swine carried off many honors at the New York state fair. The swine exhibit was fully equal to last year's record show. Durocs were in the lead with 70 entries, the state college pronouncing this class the finest in quality these experts had ever seen.

Beef Producing Stimulated.—New York has never entered into competition with the west in beef production, but owners of hill farms removed from the railroad are being shown the good points of this industry, which is economical of labor as compared to dairying. At the state fair for the first time 25 steers of fine type were shown.

Coat For Lieutenant Governor.—An all wool overcoat made before the people from the wool of sheep that grazed the fair grounds all summer, being sheared for the purpose at the fair was presented to Lieutenant Governor Walker on Thursday. The wool was of natural color, all the operations of its manufacture being done before the people. Governor Smith was similarly honored last year being given a dyed coat. The various wool growing counties are completing the pooling of the wool of the state. Results are becoming evident, it is said in the efforts of wool dealers to stampede individual farmers by reporting that such pooling will tie up their wool at prices that they will be helpless to disapprove.

Banquet to Agriculture.—For the second time the agricultural leaders of the state with the leading candidates for office were entertained at a big banquet at the Onondaga County Club by Editor Barnum of the Syracuse Post-Standard on the evening of Grange Day at the fair. The addresses from leading men of both groups were recognizant of the stress in the agricultural situation and full of the watchful waiting of farmers to see public officials give agriculture a fair show in state and federal government. This is a get together movement destined to help in a better co-operation between the people and their representatives.

Boys and Girls' Activities Promoted.—A valuable two-year-old Holstein sire of very excellent ancestry was presented to the county whose junior project work showed the best results at the fair. Banker Sabin of New York, purchased the animal in Canada. Otsego county juniors won the prize animal which will be used as a community sire in that county. Other valuable prizes were also awarded to the 50 juniors in attendance at the fair and whose work made an excellent showing. These were selected by elimination contests previously held in the 17 counties doing organized junior work. Montgomery county received first award on the excellence of its exhibits of general work done in rural schools with Oneida County second.

Bigger Fair Urged.—At the close of the state's most successful exposition, one said to fully equal the great Toronto fair in balance and variety of exhibits, there is another effort to get a two-weeks fair for next year. "Tex" McLoughlin, the well known flier was killed on Saturday in doing stunts, for the benefits of the enormous crowds. His contract had expired the day before, but he volunteered to do a few extra flights on the last day. His death may lead to the prevention in future of unnecessary hazards for spectacular purposes only, or so it is hoped.

Ugly Bull Demonstration.—To encourage the long use of valuable old sires the state college put on at the state fair a bull pen and paddock and demonstration of handling ugly animals.

Dairy Exhibits Generous.—Despite the flurry over danger of infection with tuberculosis of accredited herds at the big fair it was a record exhibit with Holstein's leading. In a new class with $410 in prizes for the best five dairy cows in milk, a Bath man who had never bred show animals carried off first place with Ayrshires. Jerseys won second place and Holsteins third. The week long judging contest of nine cows from the state institution farms, whose milk records were known, was very popular with both men and women. Prizes to the value of $1500 will be awarded to the seven best placings of the animals.

NEW JERSEY NEWS

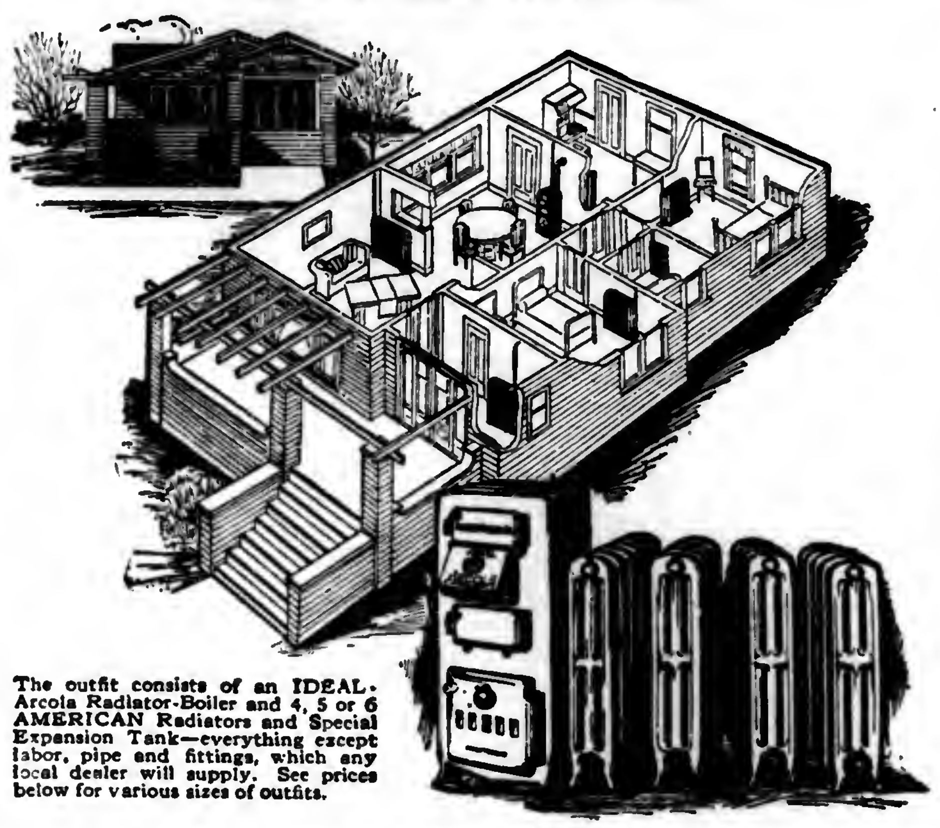
Crops Thriving.—Fair, cool and dry weather prevailed during the week in New Jersey with ample sunshine that proved very advantageous for farm work. One light frost—the first of the season—did practically no damage. Corn is ripening, cutting and shocking are in progress, and silos are being filled. Most of the plowing for wheat is almost completed and some has been sown. Not all of the buckwheat has been cut. Meadows and pastures are showing the effect of no rain, and the need of rain is further felt for Fall seeding and the better maturing of late white and sweet potatoes. Harvesting of peaches, apples, tomatoes, peppers, potatoes, and cranberries is in progress. Tomato canneries are in full operation and offer a very low price. Grapes have done fairly well in some localities and poorly in other sections, while the same is true of peppers. The honey season has been fairly good, so far. In extreme Southern sections, the fourth cutting of alfalfa hss been obtained.

Unusual Farmers' Day.—Among interesting activities, which farmers' organizations of various kinds in this state are carrying on nowadays, the Chesterfield Farmers' Day under the auspices of the Chesterfield Baptist Church and the community of Chesterfield in Burlington County during the week was especially novel. This combination of country fair and harvest home was a part of a program of the Men's Community League, of Chesterfield and Jacobstown, for the purpose of promoting civic interest among all of the residents and to make the locality such an attractive place in which to live, that the young folks on the farms in that section would withstand the allurements which the cities in New Jersey possess and find right in their midst in the Burlington County centre of agriculture, activities in every way equal to those that the populous centres could offer. About a month ago a horse show and a parade were held in connection with the Jacobstown harvest home. Some 75 of the finest horses to be found anywhere, owned by the farmer residents of the community, were groomed, polished and paraded thru the village and finally judged on the grounds of a church. One farm had four Percherons in the exhibit. The horses were mostly ridden by the younger farmers and the sons of the older men, while the girls did their part by representing in costume the different nations of the world in floats and other arrangements. Some 800 persons enjoyed the harvest home supper that came as a wind-up to this day's activities. A dairy cow exhibit was one of the main attractions of the week's Farmers' Day, and thousands of farmers and their relatives and friends from all parts of Central Jersey were interested in the show. Chesterfield and surrounding territory is practically a dairymen's section and purebred animals are fast replacing old scrubs and grade cows there. The New Jersey State Holstein Breeders' Association was represented at the Farmers' Day by James G. Brill, manager of the Forsgate Farms located at Jamesburg. Those farms offered a registered Holstein bull calf as a prize for the best dairy animal on exhibition. A silver loving cup was also awarded for the best yearling heifer exhibited. Paul B. Bennetch, of the State Bureau of Markets, gave a demonstration in testing milk to show the actual amount of sediment in ordinary milk, and how important it is to use the utmost care in the handling of the product of the dairy cow. Prof. J. W Bartlett, of the Extension Division of the State College, assisted in judging the cows. President D. B. Aitken, of the National Holstein Breeders' Association, delivered a talk on the advantages which purebred Holstein cows afford to dairymen over the ordinary kind.

Potato Growers' Outing.—The Mercer County potato growers' picnic and show held on the high school grounds at Hightstown during the week was very much of a success, and was largely attended by growers of this vegetable from many parts of Central New Jersey. Several prominent seed growers from New York, Maine and Virginia informed the potato growers of seed conditions in their states. The potato section of Mercer County having been divided into several communities, a prize was given to the community putting on the best exhibit, which was based on quality, quantity and attractiveness. There was keen competition between the communities in the contest.—Kelly, Sept 25.

IDEAL-Arcola Radiator Boiler Farm Home Heating Outfit

(no cellar needed)



The outfit consists of an IDEAL-Arcola Radiator-Boiler and 4, 5 or 6 AMERICAN Radiators and Special Expansion Tank—everything except labor, pipe and fittings, which any local dealer will supply. See prices below for various sizes of outfits.

When the cost of your heating is figured on a yearly basis, the IDEAL-Arcola heating will be found to be the *cheapest heat* in the world, for it lasts forever—heats every room—uses no more coal than a stove, never needs repairs, is clean and easy to run. It gives you the same delightful warmth that city residences have.

Any dealer will furnish in sizes to suit rooms and climatic conditions.

For Soft Coal	No. 1-B Size IDEAL-Arcola with	100 sq. ft. of Radiation	$142
	" 2-B " " " "	150 " " "	176
	" 3-B " " " "	200 " " "	213
	" 4-B " " " "	250 " " "	251
	" 5-B " " " "	300 " " "	290
For Hard Coal	No. 1-A Size IDEAL-Arcola with	135 sq. ft. of Radiation	$163
	" 2-A " " " "	200 " " "	206
	" 3-A " " " "	265 " " "	251
	" 4-A " " " "	330 " " "	299
	" 5-A " " " "	400 " " "	349

Prices include Expansion Tank and Drain Valve. Prices do not include labor, pipe and fittings used in installation and which are supplied by the local dealer at extra charge. Radiation is of regular 38-in. height 3-column AMERICAN Peerless, in sizes as needed to suit your rooms. Outfits shipped complete f. o. b. our nearest warehouse, at Boston, Providence, Worcester, Springfield (Mass.), Albany, New York, Philadelphia, Harrisburg, Pittsburgh, Baltimore, Washington, Richmond, Buffalo, Cincinnati, Indianapolis, Birmingham, Detroit, Chicago, Milwaukee, Minneapolis, St. Paul, Des Moines, or St. Louis.

Shipped complete for immediate installation

The beauty of the IDEAL-Arcola method is that no cellar is needed. Everything is on one floor. The Arcola is placed in any room that has a chimney connection. No running to cellar. Same water is used over and over again for years. No fire risk.

Buy now at present attractive prices for outfits complete!

IDEAL-Arcola outfits consist of the boiler and radiators to heat various size houses. Write us your requirements! Unlike stoves, there are no coal-gas leaks in the living-rooms. The IDEAL-Arcola delivers the soft, radiant warmth of hot water—not the dry burnt-out atmosphere of stove heating. There is no fire risk to building—no danger to children—fire lasts for hours! The Arcola burns hard or soft coal

Catalog showing open views of houses, with the IDEAL-Arcola Boiler in position will be mailed (free). Write today

Sold by all dealers. No exclusive agents. AMERICAN RADIATOR COMPANY Write to Department F-30 Chicago

"Let the hair go with the hide"

Specialists in tanning Horse, Cow, Calf or any kind of hide with hair or fur on it. We make robes, coats, caps, gloves, muffs, rugs, etc., to your order. You save money and we save your furs. Free catalog of stylish fur garments. Free instructions for handling furs. Fur garments and goods of all kinds repaired and made like new.

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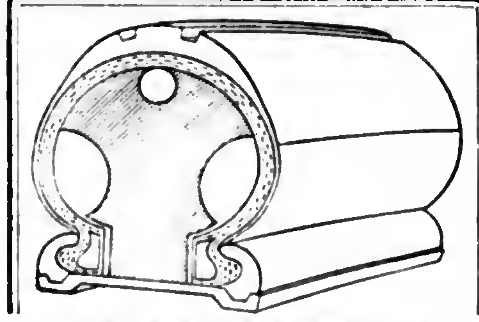

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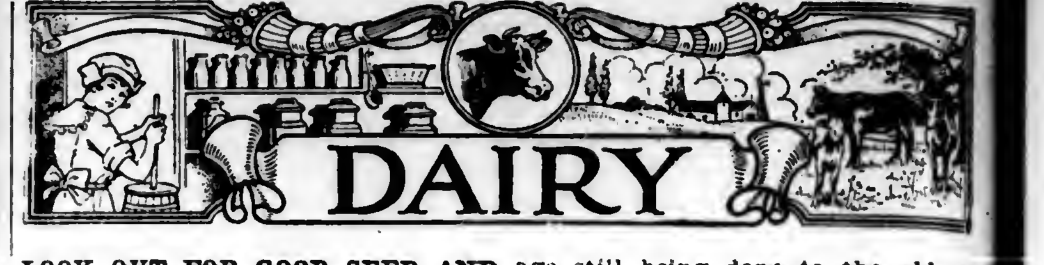

LOOK OUT FOR GOOD SEED AND GOOD FEED

There has never been a time in which fraud is and has been flourishing so highly than the last year or the last few years. What is the reason?

Simply this, that during the war times, there was a shortage of everything no matter be it of household or cattle or crop—many of the daily needs were absolutely not be had. From this ocasion, thousands of users and smart (?) people have made use by making substitute or Ersatz things in various ways without any labelling of the quality.

Grass and grains, also cattle feed of all kinds, simply consisted of the most worthless things as ground coco and peanut shells and sand. Worthless seeds of all kinds have been brought in trade here in Holland and at high prices. Now when everything is turning back a little to pre-war conditions and a rigid control is exercised on everything again, some of the smart people are still trying to put worthless products on the market—out they stand as before the war again with big letters in the newspapers, so that everybody knows who they are. Is not this an excellent method? It should be done more and more and everywhere.

The public, however, should also learn to understand that they are also often the cause of such deceitfulness themselves. They often want to have things at the cheapest price and they compel the dealers to make special things to comply with the requirements of these people.

The public should understand that at present conditions it is impossible to bring seed and feed as cheap on the market as it was before the war, the production costs of everything are much higher.—L. Dykstra, Vreeland, Holland.

WHAT IS A GOOD BULL WORTH?

We are here in the country of the bull associations, the first ones being founded in 1898 on a co-operative basis.

The purpose of these bull associations is, as the readers know, the improving of the milk and fat production of the herds in general and further to obtain uniformity in size and exterior properties of the herds.

As it is impossible for the little farmer to purchase a fine bull for himself, generally 10 to 15 farmers join the bull association and each pays in proportion to the number of cows he wants to have bred to the association bull. Every year a short report of the working of the association is spread before the members. The milk yield and the butterfat contents are studied once in 16 days, so that at the end of the milk giving period, every member can see which cow is a good one, and which is a boarder. It need not be said, that where present times do not allow boarders, the latter class of animals have to look for some other philanthrophic farm, but the latter are very scarce here, they are generally sent to other countries as Italy and Austria, where they have no special requirements as to the milk yields and fat contents, homage still being done to the old regime—A cow is a cow.

It would take too much time here to expatiate on all the particulars of association work, moreover every American knows all about it, for also in America this association life has taken a wide flight, but in this short account I shall give some figures from a small association of only five members and where in 1909 the average milk yield was per head: Per year only 6400 pounds of milk, with an average butterfat content of only 3.10 per cent. The report of the same little association was in 1914 thus just before the war, when the cows got still everything they needed, contrary to the war period when people and animals have been starving here: Per year 8800 pounds of milk with an average butterfat of 3.28 per cent.

A little figuring shows that the average yearly increase in milk production has been 8800 less 6400 makes 2400 and this divided by 4 years makes 600 pounds of milk per day and per cow. This means for a herd of 20 cows, as was the average here of these five members of the association mentioned, 40 pounds of milk daily and in 300 days 12,000 pounds of milk. Where the price of one quart of milk here is at present 15 cents (Holland money, about 10 cents American value), it would mean a yearly increase of $600 or $30 per cow per year.

A good registered sire was purchased here before the war for prices varying from $200 to $1500. (In America good sires can be purchased for prices of $150 to $300, thus much cheaper than here), a scrub sire here cost before the war about $100 to $150, and this is the reason why the small farmers here generally join in purchasing a registered bull.

Having once purchased a good bull, the association uses this bull three years, then the association and her sister association change bulls and afterwards a third association changes, and so it occurs that excellent bulls often serve here 8 to 9 years. This method is thus a double co-operation method, first in the purchasing of the bulls and further in the changing.—L. Dykstra, Vreeland, Holland.

SILO FILLING SUGGESTIONS

It is important to fill the silo when the corn is exactly at the right state of maturity, that is, when the grain is in the dent and glazed, but can still be broken with the thumb nail. Under average conditions, the two bottom leaves will be turning brown and the shucks will be turning yellow at the ends.

There is more danger of putting the silage in too dry than too moist. With a stave silo the hoops should be tightened up so as to exclude the air and generally loosened a little after the silage swells the staves.

The corn should not be cut down too far ahead or it will dry out. It will take at least 6 teams to keep the average silo-cutter busy. The silage should be well tramped in order to exclude the air. It should be kept higher at the walls than in the center. At least two men in the silo are necessary when a distributor is not used. It is advisable to use concrete tampers to pack the silage. This prevents moulds from developing. The silage should be cut into pieces ½ to ¾-inch long to make it pack well and save waste in feeding. This takes more power but it is worth it.

The silage should feel wet after it is put into the silo. If corn is very mature when cut and is therefore dry, add water. A small stream may be run into the blower from a barrel or tank. The blower should be run a few minutes each morning to clear out the air before any one enters the silo.

Shock corn may be put into the silo if water is added at the rate of 1 pound of water for each pound of shock corn. It may be advisable, under certain conditions, if the high price of corn continues, to shuck out the corn and put the stalks into the silo. There is no objection to beginning to feed as soon as the silo is filled. This prevents waste through spoilage on top.

PREVENTING MILK FEVER

There are probably many farmers who do not understand how to prevent milk fever and caked udders in cows. Six years ago one of my cows had milk fever. This taught me a lesson that has been very valuable to me since, for from that time to this I have had no caked udders nor milk fever.

We cured that cow of the fever by pumping air into her teats with a bicycle pump and tying strings around the teats. She was paralyzed when we began working with her at about 7 A. M., but by noon she was able to stand, and soon recovered.

Since then I have learned that milk fever is caused by a rush of blood to the udder, causing congestion, and a consequent loss of blood from the brain and other organs. The preventative is very simple; it is merely to leave the udder full of milk for twenty-four hours after the cow freshens.

At the time the calf is born the udder is full of colostrum, or first milk, and under normal conditions the true milk does not come until two or three days after. If this colostrum is left in the udder as it should be (except what is naturally needed for the calf), the new milk will come in slowly and naturally and there will be no caked udder.

I do not milk a fresh cow at all until the calf is 24 hours old and then only a little. I try to leave some of the colostrum in the udder until the new milk begins to come. I also keep the cow from much milk-producing feed at this time. If she has been well fed during the dry period, a rest from eating will do her good and keep back the flow of milk until it is time for it.

I like to have the cows dry six weeks before freshening if I can, and during that time, after they are dry, I like to feed them well, so as to have the calves strong and big when they are born and the cow in good flesh. I have had calves weigh nearly 100 pounds at birth and about 200 pounds when four weeks old.

The old method of milking out a fresh cow directly after the calf is born was entirely wrong. It stimulated the flow of milk too soon for the health of the cow, and deranged the udder, leading to many serious consequences. The modern method lets Nature take her course, and a healthy cow results.—J. D. Craig, Hunterdon Co., N. J.

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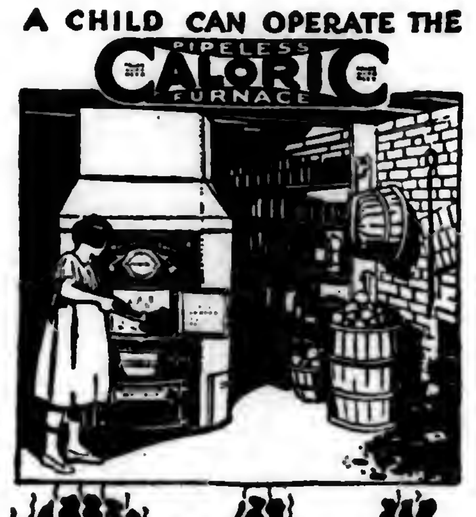

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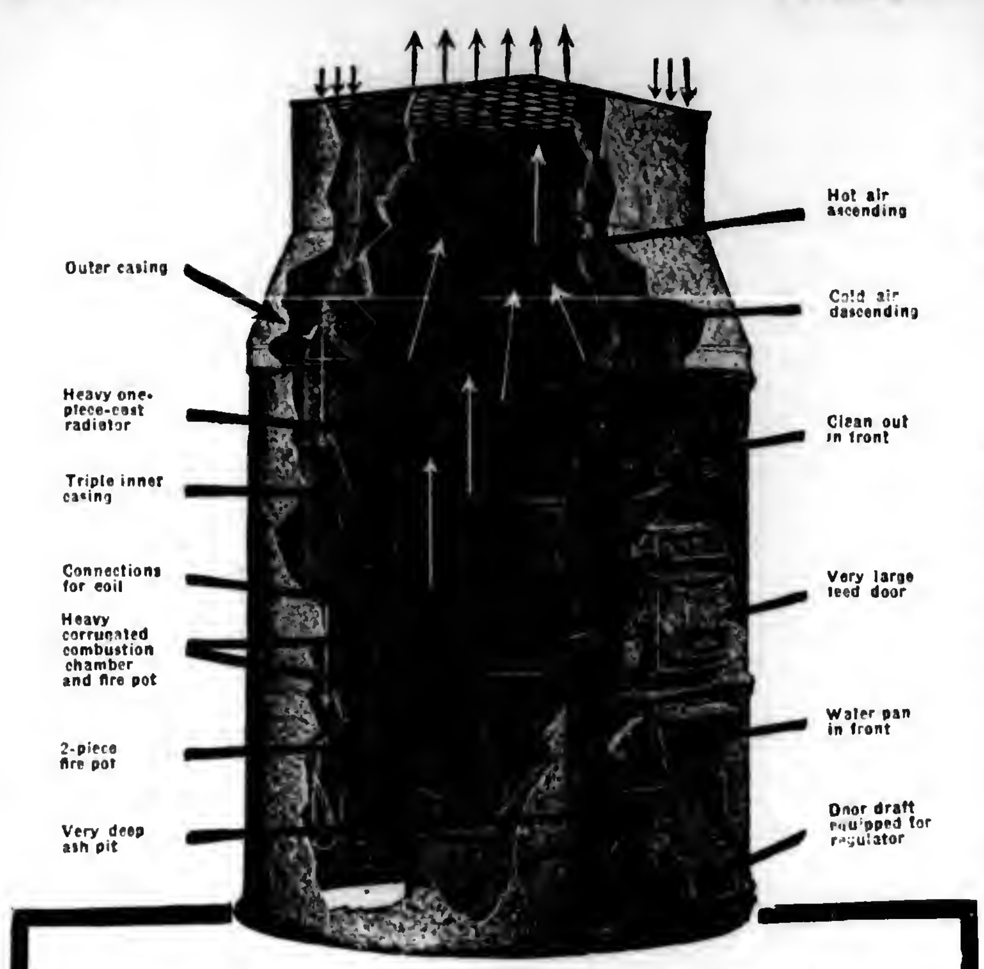

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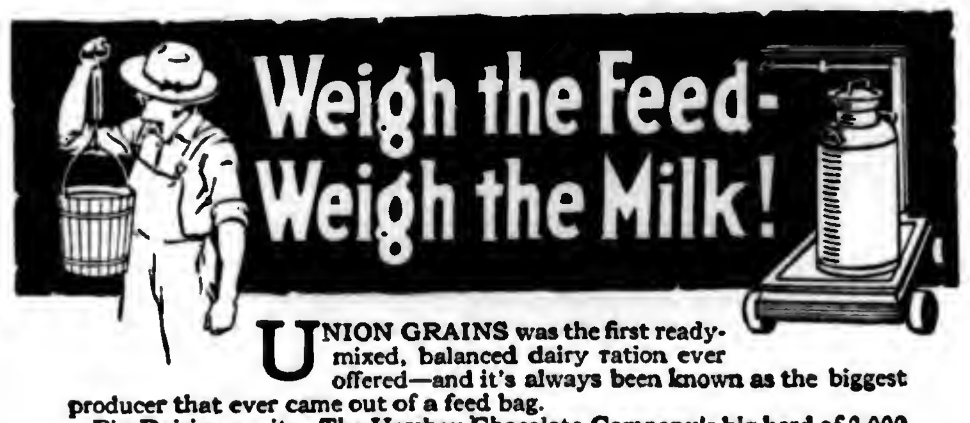

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THE UBIKO MILLING CO. Dept. P Cincinnati, Ohio

UNION GRAINS

HORTICULTURE

FRUIT STORAGE

J. P. Stewart

This is likely to be a good season for producers to store fruit. Such seasons usually follow those in which the profits from storage have been small or invisible. On the other hand, the seasons immediately following distinctly profitable storage seasons are likely to be good ones for selling directly from the orchard. The reasons for this are evident. The big profits of the season immediately preceding tend to make the buyers reckless, and they go forth prepared to bid to the limit on the new crop, so as to have plenty of material on which to repeat their gains. This is what happened last fall, with the result that a big lot of fruit brought nearly or quite as much directly out of the orchard as it did three or more months later, when it was brought from storage.

The sharp advance in storage rates is also likely to put a damper on the amount of fruit that goes into storage this year, which again should work to the advantage of those with the courage to go ahead in spite of the obstacles. The larger general crops of apples, especially in the eastern sections, are also likely to be used as an argument for lower prices out of the orchard, notwithstanding the greatly increased cost of barrels, labor, and practically everything else entering into the cost of production. The spectacle of farmer's products bringing less on the general market at the time of harvesting than at the actual cost of the package and transportation, is not at all rare however, and it has been repeatedly witnessed in several of our large cities already this year. All these facts tend to the conclusion that everyone in a position to do so, should make preparation for storing at least part of his fruit, in order to avoid the possibility of having to accept embarrassing prices at harvest time.

Opportunity for Good Common Storage

Under the present conditions, the possibilities of good common or air-cooled storage should not be overlooked. Where the climatic conditions are favorable, apples and similar products can often be held in suitably constructed houses for several months in almost as good condition as in regular commercial cold storage. The high current rates demanded for the latter, moreover, make a satisfactory substitute especially valuable.

The principal requirements for success with common storage are the right kind of a building, and proper management. The efficiency of the building depends chiefly on the adequacy of its insulation and its means of ventilation. The insulation of a building intended for common storage should be at least as good as that of a regular storage building, on account of its more exacting requirements. A poorly insulated building can not repel the heat of the early storage period nor the cold of later winter. The resulting damage to a single crop may be many times the cost of proper insulation in the first place.

Types of Insulaton.

The principal types of insulation available for use in common storage are double walls, to form the so-called dead-air spaces, and similar spaces filled with sawdust, mill shavings, granulated cork, mineral wool, hay, straw, chaff, dead leaves and similar materials. Of these, the first is least efficient, as the air in such spaces is by no means quiet or "dead," unless the spaces are made very small. Wherever these spaces extend with little or no interruption from the bottom to the top of the wall, the air in such spaces will be in constant circulation whenever there is any considerable difference in temperature between the sides of the space or wall. This results in an active transfer of the heat from the warmer to the colder side, which is just what the open space was designed to prevent.

The only way to break up this undesirable action is to make the air spaces very small, which is best accomplished by the use of one or more of the fillers mentioned above. Of those materials, the first four are usually the most efficient and practical, as the others are likely to settle and mold or rot, unless very thoroly packed and protected against moisture. Of all the materials, sawdust and mill shavings are usually the least expensive, and they are very efficient if properly handled. This requires thoro drying before using, thoro protection against later dampness by completely lining the spaces with real waterproof paper or its equivalent, and firm packing into the spaces. Of the two materials, mill shavings are generally preferable.

The really best insulating materials are cork and mineral wood, on account of their greater efficiency and permanence. Where the difference in cost is not too great, therefore, they are decidedly preferable. They are available either in loose form suitable for packing, or in slab form for direct attachment to the inside walls of the storage room. The slabs are generally used in commercial storage houses, and they are attached either with Portland or asphaltum cement, the cement serving both to support and waterproof the insulating material. Some care must be used in handling the mineral wool, as the glass-like fibres sometimes pierce the skin and cause sores, and the dust from the wool is said to be harmful to the lungs. All these materials must be protected against the absorption of moisture.

The commonest insulating material, of course, is ordinary soil. It is especially good and serviceable on hillside locations, in connection with concrete caves or vaults. The ventilation of such structures is likely to be somewhat difficult, however, unless it receives special attention. At the same time, several very successful structures of this type have been in operation in this State for some years.

Whatever form of insulation is chosen, it should completely surround the storage room. This is where most people fall. It means that the walls, floor, ceiling, doors, ventilators and even the dampers in the air-outlets should all be completely covered with some efficient insulation. The storage room should also have a vestibule of sufficient size for the outer door to be closed before the storage door is opened for the entry of fruit. The windows should be as few as possible, and should be fitted with two, or preferably three, thicknesses of glass.

Size and Number of Ventilators

To get the most out of the coolness of early fall, the air circulation in the storage room must be free and abundant. To secure this, the air-inlets or ventilators should be placed not more than 10 feet apart, all around the house. These inlets should be directly opposite each other so far as possible. They should also be placed as low as possible, and a false, slatted door (with about 1½-inch spaces between slats) should be provided so as to be just even with the tops of the inlets.

In addition, air-outlets should be provided near the center of the ceiling, and they should be continued upward thru the highest point in the roof. They should be at least 24x24 inches in cross-section, and should be repeated at least once for every 20 feet of length in the storage room.

Management of Storage Room

With a satisfactory building in place, the ultimate sucess rests with its management. This begins with the picking of the fruit, and the general process may be summed up as follows:

First—Pick fruit at right stage of maturity, neither too ripe nor too green. The condition commonly known as 'hard-ripe" is best. This means that the fruit has attained its full size and redness, but has not yet begun to soften nor to show the mellow white or yellowing colors, which indicate the attainment of eating ripeness.

Second—Avoid all bruises, punctures and similar injuries to the fruit during the harvesting. No type of storage will overcome such injuries.

Third—Cool the fruit as promptly as possible after the picking. This may be accomplished by letting it sit over night in open crates or boxes, under the trees, and then getting it into storage before it warms up, the next morning.

Fourth—Stack the fruit properly in the storage room (preferably in open slated crates, or similar packages). These crates should be stacked so as to leave straight 4-inch spaces between tiers, and have alleys running out to each ventilator, for best results. It is also well to use 1-inch cleats between the crates.

Fifth—Keep the ventilators open whenever the outside air is cooler than the inside, and close them at once when this condition is reversed. Failure to make these changes as promptly as possible, is probably the most common and the most serious fault that appears in the average management of this type of storage house. The fluctuating temperatures that follow this neglect are much harder on keeping quality than storage at uniform temperatures, even tho considerably higher.

Sixth—Use the room only for the purpose intended, viz: the storage of fruit. All packing and sorting, at least during the early and more critical season of storage, should be excluded from this room. In other words, one should keep out of the storage room, except for the purpose of adding or removing fruit, or for ascertaining its condition.

Further details on the construction and management of houses for the common storage of fruit may be found in Farmers' Bulletin 852, put out by the U. S. Department of Agriculture, Washington, D. C.

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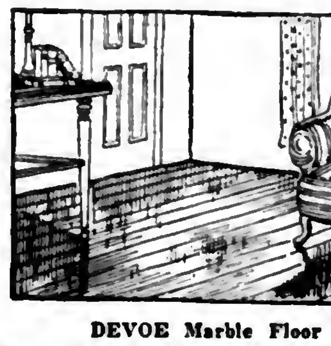

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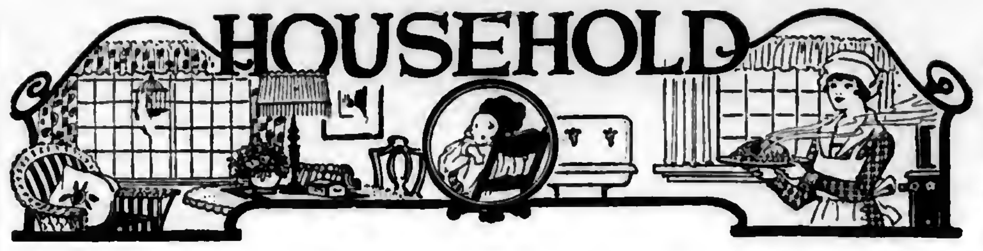

HOUSEHOLD

ONE OF OUR CONTRIBUTORS

Secretary of Maryland Grange

We present herewith a contributor to the Pennsylvania Farmer pages, Mrs. Elizabeth O. Jean of Baltimore County, Maryland. Mrs. Jean is also the efficient secretary of the Maryland State Grange. It is rather rare for the position of secretary of a state grange to be assigned to a woman, and it is on this added account that we are pleased to present Mrs. Jean. However, the fact that she has been a rather frequent contributor to these pages for several years will give her face a welcome from our household readers, we are sure. And we wish that you could all meet her personally.! She is full of energy, executive abilities and lively ideas for making the rural home and rural life more pleasant and profitable.

Mrs. Jean is a real Maryland daughter. She was born in Baltimore city, but when she was two years old she accompanied her parents to her paternal grandfather's farm in Baltimore County, and remained thereon until she was thirteen years old. She was educated in the public schools of the county, had one year in a private school, and was graduated from the Maryland state normal school. She married a Baltimore County farmer, and has continued to have not only a proper affection for this farmer but also for the farm home in which he established her, and for farm life altogether.

She has been active in the life of her community, and the fact that she has been elected secretary of the State Grange shows that she has shown capability and interest in furthering abroad from her community the welfare of farmers. She was a charter member of Roslyn Grange in her county. This Grange has done much for its community. The excellent consolidated school, the fine state road, and several other specific improvements had their inception and chief motive power in this grange.

Mrs. Jean is also a member of the Mordecai Gist chapter of the Daughters of the American Revolution.—The Editor.

THE TACTLESS MOTHER

There are many mothers who seem to be endowed with an instinctive faculty for saying and doing just the right thing when confronted by any of the numerous and complex problems that are always arising in the family of growing (and grown) children. But it is likewise a fact, that there are quite as many more who are just as skillful in bungling these problems.

Now we all feel that most mothers, even the failures, wish to do all in their power to promote the welfare and happiness of their sons and daughters; but, nevertheless, when we recall the very undesirable place, the road to which is said to be "paved with good intentions," we cannot but realize that, even tho the greater number of our parental blunders are caused by thoughtlessness, merely good intentions will not excuse us; especially when the mischief resulting from our mistakes proves as lasting—as far-reaching—as tho we had deliberately planned it.

Let us consider the mother devoid of tact. She may be a woman of the best intentions, loving and devoted. But if her sons and daughters have reached the age when they begin to feel "grown up," she does a very unwise thing if she indulges in fond reminiscences concerning their infantile pranks or ailments "before folks." To do so is sure to humiliate, and almost sure to antagonize them to say nothing of the heartache she will bring on herself; for at this age, boys and girls are apt to be supersensitive and under the smart of feeling themselves made ridiculous in the eyes of their associates, will often retaliate with some impertinence that ordinarily they would not be guilty of.

In the bosom of one's own family it may do no harm to recall how stubborn Elsie used to be as a child; or to recount how many chastisements per week were necessary to keep her in an obedient frame of mind; or—if voiced only in the home circle—even a resurrected remembrance of the abnormal and never-satisfied appetite she had for jam in her pigtail days, will do no harm; for in that environment it will at the most, only create a laugh or give rise to a little brotherly and sisterly fun.

MRS. ELIZABETH O. JEAN
Secretary Maryland State Grange

But if others are present—young friends of the girl—then the situation is more than likely to become strained and if one of the outsiders happens to be a young man just beginning to cast "sheep's eyes" at Elsie, it becomes positively tragic.

Apart from the agony of mind a sensitive girl suffers because of just such ill-advised maternal confidences, who can estimate the number of embryo romances thus shattered? It must certainly be a shock to have the dream picture of an idealized girl, that one has been secretly worshipping for some ecstatic months, ruthlessly destroyed, and to find in her place an ordinary young woman afflicted with a somewhat gluttonous predilection for the jams and jellies of gross materialism. Under such conditions, the chances are that a very youthful suitor will, in the reaction following such rude dispelling of his fond illusions, turn for solace to some other fair one.

In the following instance, the victim was the son, instead of the daughter of the house. He was very young, exceedingly bashful, and in the throes of his first "calf" love. He had the malady in its worst form, and was very anxious that his "affinity" should be brought into touch with his mother; but without a too evident effort on his part. So, he induced a younger sister to invite the girl to spend an afternoon of fudge-making with her.

She came, was introduced to the whole family, and for an hour or two everything progressed swimmingly—and "Son Henry" was blissful. Then, unfortunately, the visitor mentioned some trivial incident connected with her childish days, and immediately that blessed mother cried:

"Well, that reminds me—" and launched joyfully forth into a recital of "sonny's" life happenings from the time he was born up to the present occasion. His bottle days were dwelt upon with a long drawn-out and painful accuracy, while the nights when she hadn't been able to "get a single wink of sleep" because of his kicking and squirming with "wind colic" were accorded an equally graphic description. But the climax was reached, and poor Henry's castles in Spain entirely demolished as far as that particular girl was concerned, when she began an exhaustive (and apparently exhaustless) dissertation on worms in children, and what she gave Henry when "he had 'em."

That was the last straw! Cupid's latest recruit bounced out of the room and slammed the door; the girl washed her fudge-smeared hands and ran home—half-angry, half-ashamed and wholly disgusted. Thus another promising romance was quashed by a loving, but tactless mother, and all because she failed to remember that young people do not enjoy having their infantile disorders served up as "refreshments" in trying episode of a brand-new courtship.

Let us keep a tight rein over our motherly tongues, or even adopt a curb-bit, at the first flutter of the little god's wings amongst our growing brood. For by so doing, we shall save them from undeserved ridicule, and ourselves from being classes among the failures in motherhood.

FALL CLOTHING IDEAS

The "chemise dress" is more prominent than any other in the early style shows. And the striking feature about them is the gold embroidery.

Jaunty suits with short coats also have embroidered pockets and collars, some of it in bright colors, except when the suits are in brown tones the embroidery is in gold shades. And there seem to be more brown coats, suits and dresses in the fall showings than of any other color. There are semi-fitted jackets, and these also have ebmroidered pockets and collars. The collars are buttoned snugly up around the neck, especially on the long coats. One of the favorite collars on the separate coats is the shawl style, very high in the back and having long points in front. Tailor-made suits also feature trimming of narrow braid or bright-colored embroidery, and considerable fur. Skirts to the suits are usually simple and untrimmed, except perhaps occasionally a border of fur or braid matching that on the coat.

"House-All" Dresses

The "house-all" dress is the latest. At first glance it looks like an ordinary housedress, but it is different. In place of the usual skirt there are trousers, quite wide at the top and bottom to allow plenty of room for movements. It is buttoned down the front or the back. The upper part is in kimona effect, and trimmed with a band at the neck and on the sleeves. Uusually these bands are of plain color, while the main part of the garment will be striped or in long vine-work designs. There are large deep pockets buttoned onto the wide belt. The advantage of this design is that it affords plenty of width without having the skirt drop down in the way when the housewife stoops or kneels down.

Your "Best" Dress

Sleeves for frocks are either three-quarter or bell-shape, with all sorts of variations. Cuffs of every description are in fashion, some having streamers fastened to the cuffs and left to dangle. Narrow ribbon is used for the streamers, often in satin, and having a picot edge, and sometimes in a contrasting color. For instance, a brown dress may have a streamer of lapis or turquoise blue, lapis being a shade darker than the turquoise. Browns also show streamers of tangerine color. Other sleeves show a wide flare cuff, and have not less than seven rows of narrow ribbon sewed round and round, and finished with a band at the top. The neck of the dress with such a sleeve will have perhaps two ruffles of the ribbon in a strongly contrasting color, and about an inch wide.

Veils

One of the largest retail stores in this country says that our American women buy more veils in proportion to population than the women in any other part of the world, not even excepting in Paris. This fall the veils that are selling the most lively are the blue or brown mesh with chenille dots. Henna-colored veils have blue dots, and pale yellow or dark gold dots are seen on dark brown meshes. The dots are little things with just a faint suggestion of the color. The embroidered scroll veil is not so popular as it has been. Some fancy meshes with designs worked out in the mesh are shown in black, navy and brown. Shetland veils seem to be popular, also. They come in both the square yard and the yard and a half lengths. Some are made up with a band that instead of fitting close to the neck are stitched onto the veil. Some have jersey bands woven onto the veils which are said not to tear off as the ribbon is liable to do. This style is called the "bandolier,' and is snapped about the throat and thrown up over the hat. Some Chantilly veils are sewed to the hats.

Fashions in Sweaters

Gaily colored silk trimming is the newest thing in the jumper sweaters, which are often knitted of heather mixture yarns to match the fancy skirts made of tweed. Some have two narrow bands of contrasting color knitted about the neck and sleeves, and broader bands around the bottom put on with ribbed knitting. By the way, knitted silk hats are a feature of fall notions in dress. They are made on wire frames with narrow brims, tho some are wired with wire slipped thru rings of various colors. There are still many fishnet jumpers shown, and they are worn over contrasting waists. Twine, dyed or used in its natural color, is used for trimming.—Esther A. Cosse, Passaic Co., N. J.

PENNSYLVANIA FARMER PATTERNS

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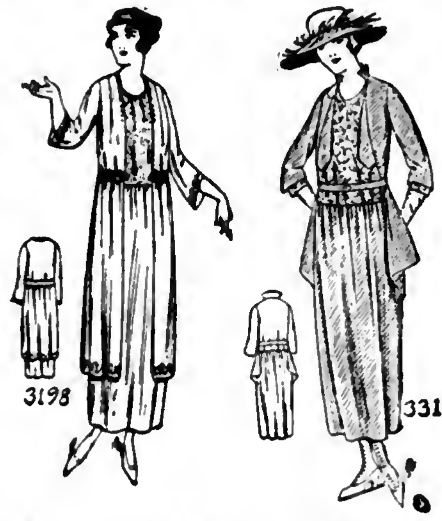
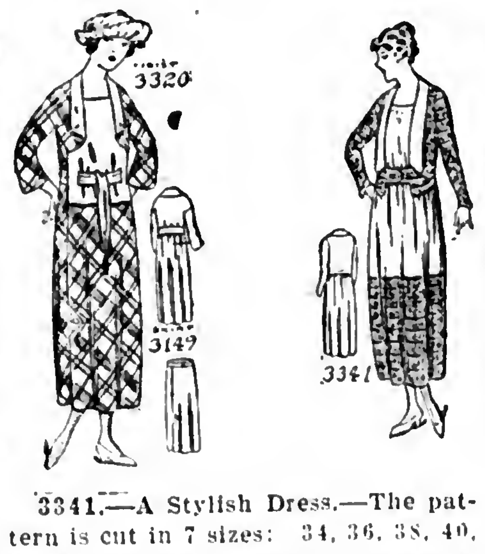
3198. "Chemise" Model for Ladies.—It is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. The width of the skirt at lower edge is 2 yards. A medium size will require 7¾ yards of 38-inch material. Taffeta, serge, foulard, voile, shantung, velvet or gabardine may be used. It makes a good gown for maternity wear. Pattern, 10 cents.



3317.—A New and Stylish Design.—Pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 5¼ yards of 42-inch material. Serge and fancy silk or satin braided with soutache or with floss would be attractive. It is also good for velveteen, taffeta, velours, duvetyne, jersey cloth, faille or broadcloth. The width of the skirt at the foot is about 1¼ yard. Pattern, 10 cents.

Waist 3320; Skirt, 3149.—The waist is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. The skirt in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. The width of the skirt with plaits extended is about 1⅞ yard. To make this design for a medium size will require 7⅛ yards of material 27-inches wide. This model would be attractive in taffeta, plaid woolens, serge, satin or duvtyn. This illustration calls for two separate patterns, which cost 10 cents each.



3341.—A Stylish Dress.—The pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 6 yards of 36-inch material. Taffeta, velveteen, serge, crepe, duvetyne, faille, and garbardine are attractive for this design. Skirt measures about 1¼ yard at lower edge. Pattern, 10 cents.

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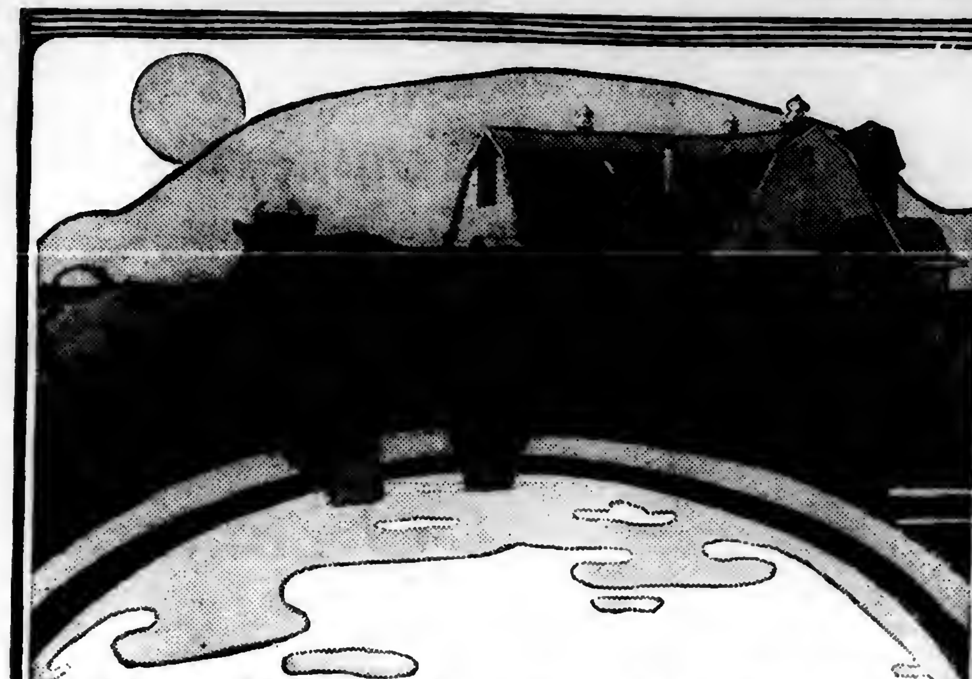

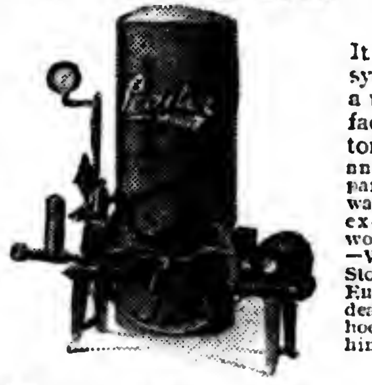

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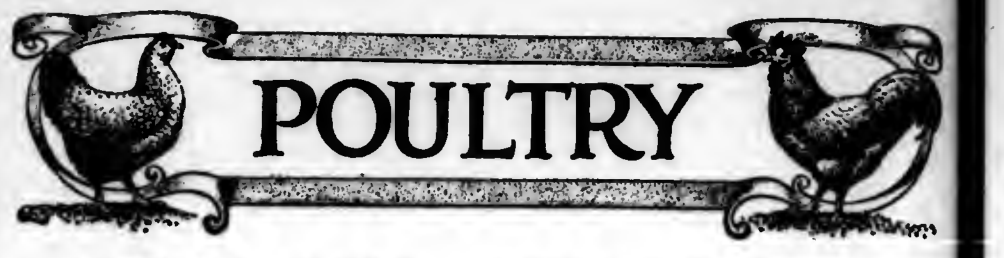

POULTRY

OCTOBER POULTRY HINTS

By R. G. Kirby

A mill for grinding bone and grain is a profitable investment where large flocks of poultry are owned. At butchering time there will be many bones that can be turned into meal for the hens. It will save money to grind up home raised grain for producing the dry mash. Often the grinding can be done on rainy days when the time has a minimum value for other work. The only trouble with small hand mills is the time required to grind a bushel of grain. With large flocks it pays to use a power grinder.

* * *

If the breeding geese become too fat it will impair the hatchability of the eggs next spring. Try feeding them oats instead of corn for the grain part of the ration. They are fodder eating birds and like the clover chaff, corn fodder and any vegetable trimmings or plant food that is relished by cows. Geese fatten so easily on a heavy corn diet that it must be used carefully except for geese that are being prepared for market.

* * *

Try selling broilers to the motoring friends who will drive out after them and buy them alive. It saves dressing the fowls or delivering them live weight. They can be weighed on ordinary kitchen scales and the legs tied together to prevent an escape. The price must be about a couple cents a pound above the wholesale price to pay for the trouble of making separate sales. The quality of the broilers must be sufficient to make pleased customers. There is not much money in broilers but they are a by-product of the business of producing pullets and breeding cockerels. We do not believe in killing off the cockerels as soon as the sex can be determined in order to save feed, because the best of the cockerels in purebred flocks have breeding powers which are worth saving. And the best of the lot cannot always be selected until they reach broiler age.

* * *

Hens that have been running on range without a balanced ration may molt earlier than they would if fed heavily for eggs. Such hens should not be marketed as early molters. Hens that have been brooding late hatches of chicks may go into a partial molt early in the fall about as soon as the chicks are weaned. But the hen which has laid well through the spring and starts to molt in the summer while on a laying ration is apt to be a poor layer. If you still have any such hens on the farm they can be profitably culled out. They are not as good as the ragged late molting hens which look rough and pale.

* * *

Band the pullets before they reach the stage of maturity that may cause them to become confused with the hens. Or if the hens are already banded it is not necessary to mark the pullets as a lack of bands then denotes pullets. It pays still better to mark the pullets that mature earliest as they are the best breeders. Colored spiral bands are the cheapest and they are suitable to mark birds according to age. Numbered bands are necessary in trapnesting. They are useful just for marking the birds in separate breeding pens even if trapnesting is not practiced. If birds that are sold are banded the buyer appreciates it as then they are marked to distingush them from the buyer's home flock.

BREEDING AND CULLING FOR WINTER LAYERS

In making a survey of the conditions existing on farms in this part of the country where from 50 to 100 hens are kept, principally for the eggs they lay, I find that a good many farmers have reduced the size of the flocks, and that in the management of what they have there is a chance for much improvement. One would naturally think that with the greatly increased price of eggs over those paid a few years ago, that farmers would look more closely into the successful ways and methods of egg production, but with only now and then a farmer does this seem to be the case.

A good many fail in the first place in breeding and raising the stock, the poultry house may be all right, the food rations rightly balanced and good care given, but if he has not got the right sort of hen he can not accomplish much in the way of getting a profitable egg yield.

To get a good production of winter eggs we must have winter layers. The hens do not get their new coat of feathers on and the pullets are not fully developed in time to lay in the fall and early winter when fresh eggs are in great demand and the prices the highest. The pullets should be hatched in April, excepting the Leghorns which may be got out a month later. And only the hens that molt off in good season should be kept and expected to lay in the fall. To get a flock of the most profitable layers requires two or three, or more years of careful selecting and breeding. The kind that produces when others are idle, are vigorous and have the vitality to endure outdoor conditions such as we have in this climate.

Farmers generally give but little attention to the selection of breeders, as far as vitality and laying qualities are concerned. I have known of several instances where hens have been bred 2 or 3 years that came out of flocks that have had the roup for several years, more or less. Certainly we cannot expect to raise chickens that will have any stamina from diseased parent stock.

When once you have the matter of healthfulness and vitality well understood and fixed in your mind, then begin looking for layers to breed from, so as to build up a reliable egg-producing strain. In making the proper selection of the hens to breed from, is where the majority of the ordinary poultry keepers fail, keeping doubtful specimens just to see how they will turn out, is very poor practice. Too many farm flocks that pay a fair profit, a more thorough and careful culling would increase the profits. The art of culling correctly is not easily or quickly acquired by every one, but all can make an effort and this will surely bring some improvement.—M. C. Couch, Central N. Y.

IMPOSED UPON BY RELATIVES

About three years ago my husband, our three children and myself moved on to a farm of some forty acres about seven miles from a village of 2500 people. We had a good boss and a good bargain. Mr. and Mrs. L. were the kindest people I ever knew and I will never forget them for what they have done for us. We could have made money, for all we had to buy was our groceries and a few clothes. But we had our heads eaten off by our relatives and so-called friends. I will tell our experience as others may profit by what we lost.

We moved about the first of February. Mr. L. gave us two fat hogs and we butchered them on the fourth of February. The lard we potted, also, the nice sausage and the nice meat. At our moving, ten or twelve of our relatives helped. All went well until the bluebirds came, and then came the company every Sunday. We had from four to twelve of our relations and friends from the village. They would come in the morning and stay all day and when evening came they were filled up with the boss's vegetables and butter, and our meat that was given to us for our family. Then they would leave and I would say to my husband, "John, the boss is not going to stand for this," but he never said a word.

Well, when our company would leave they would say, "Come see us sometime," but we never got a change for when Sunday would come more company would come. They got to coming thru the week for a day or two at a time, and I said to my husband "John this thing must stop. Your relations and my relations and our so-called friends are not only eating up our profits, but the boss's too. and he and his good wife are not going to stand for it and I don't blame them. The company is just eating us out house and home. Here it is the thirtieth of September and our meat is about all gone." Well, John said to me, "If we say anything to them they will get mad. We can't afford that—it will soon get cold and then they will stop coming. We will go up to see Sarah next Sunday. She has been down to see often enough with her man and his children. Sunday came, and we got up early and milked, and by nine o'clock we were on our way to John's sister Sarah. We went about two miles when we met Sarah with her five children. Then it was my turn to say something and I said, "Why, Sarah, we are coming to spend the day with you." "O" said she, "Bill" (that was her husband) went on a fishing trip for three days so I thought I would pack up the children and come down to you, and besides I haven't got anything to cook in the house." We were just two miles from our house and five from the village so John said, "We will turn back."

Well that day it just cost John $2.50 for meat, so by the time he was thru, the money we had saved for shoes was spent on company and that is the way it went until winter set in. John got discouraged and thought he wasn't making anything; so I said, "If I am here next summer, I am going to run a boarding house for friends and relatives." When spring came I simply told my so-called friends and relatives that every Sunday I was going to serve dinner at 75c each and supper 50c each. The company stopped and we are making money; we have paid off all our debts and have money in the bank.—A Farmer's Wife and a Subscriber to your Good Paper.

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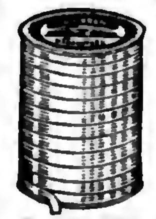

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Whispering Smith

by Frank H. Spearman

(Continued from Last Week)

CHAPTER XXX

The Fight in the Cache

Karg, on horseback, was already bending over him, revolver in hand. But the shot was never fired. A thirty-thirty bullet from the ground knocked the gun into the air and tore every knckle from Karg's hand. Du Sang spurred in from the right. A rifle-slug like an axe at the root caught him thru the middle. His fingers stiffened. His six-shooter fell to the ground and he clutched his side. Seagrue, duckling low, put spurs to his horse, and Whispering Smith, covered with dust, rose on the battle-field alone.

Hats, revolvers, and coats lay about him. Face downward, the huge bulk of Bill Dancing was stretched motionless in the road. Karg, crouching beside his fallen horse, held up the bloody stump of his gun hand, and Du Sang, fifty yards away, reeling like a drunken man in his saddle spurred his horse in an aimless circle. Whispering Smith, running softly to the side of his own trembling animal, threw himself into the saddle, and, adjusting his rifle sights as the beast plunged down the draw, gave chase to Seagrue.

CHAPTER XXXI

The Death of Du Sang

Whispering Smith, with his horse in a lather, rode slowly back twenty minutes later with Seagrue disarmed ahead of him. The deserted battleground was alive with men. Stormy Gorman, hot for blood, had come back, captured Karg, and begun swearing all over again, and Smith listened with amiable surprise while he explained that seeing Dancing killed, and not being able to tell from Whispering Smith's peculiar tactics which side he was shooting at, Gorman and his companions had gone for help. While they angrily surrounded Karg and Seagrue, Smith slipped from his horse where Bill Dancing lay, lifted the huge head from the dust, and tried to turn the giant over. A groan greeted the attempt.

"Bill, open your eyes! Why would you not do as I wanted you to?" he murmured bitterly to himself. A second groan answered him. Smith called for water, and from a canteen drenched the pallid forehead, talking softly meanwhile; but his efforts to restore consciousness were unavailing. He turned to where two of the cowboys had dragged Karg to the ground and three others had their old companion Seagrue in hand. While two held huge revolvers within six inches of his head, the third was adjusting a rope-knot under his ear.

Whispering Smith became interested. "Hold on!" said he mildly, "what's loose? What are you going to do?"

'We're going to hang these fellows,' answered Stormy, with a volley of hair-raising imprecations.

"Oh, no! Just put them on horses under guard."

'That's what we're going to do," exclaimed the foreman. "Only we're going to run 'em over to those cottonwoods and drive the horses out from under 'em. Stand still, you tow-headed cow-thief!" he cried, slipping the noose up tight on George Seagrue's neck.

"See here," returned Whispering Smith, showing some annoyance, "you may be joking, but I am not. Either do as I tell you or release those men."

"Well, I guess we are not joking very much. You heard me, didn't you?" demanded Stormy angrily. "We are going to string these critters up right here in the draw of the first tree."

Whispering Smith drew a pocket-knife and walked to Flat Nose, slit the rope around his neck, pushed him out of the circle, and stood in front of him. "You can't play horse with my prisoners,' he said curtly. "Get over here, Karg. Come, now, who is going to walk in first? You act like a school-boy, Gorman."

Hard words and a wrangle followed, but Smith did not change expression, and there was a back-down. "Have you fellows let Du Sang get away while you were playing fool here?" he asked.

"Du Sang's over the hill there on his horse, and full of fight yet," exclaimed one.

"Then we will look him up," suggested Smith. "Come, Seagrue."

"Don't go over there. He'll get you if you do,' cried Gorman.

"Let us see about that. Seagrue, you and Karg walk ahead. Don't duck or run, either of you. Go on."

Just over the brow of the hill near which the fight had taken place, a man lay below a ledge of granite. The horse from which he had fallen was grazing close by, but the man had dragged himself out of the blinding sun to the shade of the sagebrush above the rock—the trail of it all lay very plain on the hard ground. Watching him narrowly, Smith, with his prisoners ahead and the cowboys riding in a circle behind, approached.

"Du Sang?"

The man in the sagebrush turned his head.

Smith walked to him and bent down. "Are you suffering much, Du Sang?"

The wounded man, sinking with shock and internal hemorrhage, uttered a string of oaths.

Smith listened quietly till he had done; then he knelt beside him and put his hand on Du Sang's hand. "Tell me where you are hit, Du Sang. Put your hand to it. Is it the stomach? Let me turn you on your side. Easy. Does your belt hurt? Just a minute, now; I can loosen that."

"I know you," muttered Du Sang thickly. Then his eyes—terrible, rolling, pink eyes—brightened.

"Du Sang, you are not bleeding much, but I'm afraid you are badly hit," said Whispering Smith. "Is there anything I can do for you?"

"Get me some water."

A creek flowed at no great distance below the hill, but the cowboys refused to go for water. Whispering Smith would have gone with Seagrue and Karg, but Du Sang begged him not to leave him alone lest Gorman should kill him. Smith canvassed the situation a moment. "I'll put you on my horse," said he at length, "and take you down to the creek."

He turned to the cowboys and asked them to help, but they refused to touch Du Sang.

Whispering Smith kept his patience. "Karg, take that horse's head,' said he. "Come here, Seagrue; help me lift Du Sang on the horse. The boys seem to be afraid of getting blood on their hands."

With Whispering Smith and Seagrue supporting Du Sang in the saddle and Karg leading the cavalcade moved slowly down to the creek, where a tiny stream purled among the rocks.

Afterward they got a cot under him. With surprising vitality he talked a long time to Whispering Smith, but at last fell into a stupor. At nine o'clock that night he sat up. Ed Banks and Kennedy were standing beside the cot. Du Sang became delirious, and in his delirium called the name of Whispering Smith; but Smith was at Baggs's cabin with Bill Dancing. In a spasm of pain, Du Sang, opening his eyes, suddenly threw himself back. The cot broke, and the dying man rolled under the feet of the frightened horses. In the light of the lanterns they lifted him back, but he was bleeding slowly at the mouth, quite dead.

Bill Dancing, who had been hit in the head and stunned, had been moved back to the cabin at Mission Spring, and lay in the little bedroom. A doctor at Oroville had been sent for, but had not ocme. At midnight of the second day, Smith, who was beside his bed, saw him rouse up, and noted the brightness of his eyes as he looked around. "Bill," he declared, as he sat beside the bed, "you are better, hang it! I know you are. How do you feel?"

"Ain't that blamed doctor here yet? Then give me my boots. I'm going back to Medicine Bend to Doc Torpy."

In the morning Whispering Smith, who had cleansed and dressed the wound and felt sure the bullet had not penetrated the skull, offered no objection to the proposal beyond cautioning him to ride slowly. "You can go down part way with the prisoners, Bill,' suggested Whispering Smith. "Brill Young is going to take them to Oroville," and you can act as chairman of the guard."

Before the party started, Smith called Seagrue to him. "George, you saved my life once. Do you remember—in the Pan Handle? Well, I gave you yours twice in the Cache day before yesterday. I don't know how badly you are into this thing. If you kept clear of the killing at Tower W I will do what I can for you. Don't talk to anybody."

CHAPTER XXXII

McCloud and Dicksie

News of the fight in Williams Cache reached Medicine Bend in the night. Horsemen, filling in the gaps between telephones leading to the north country, made the circuit complete, but the accounts, confused and colored in the repeating, came in a cloud of conflicting rumors. In the streets, little groups of men discussed the fragmentary reports as they came from the railroad offices. Toward morning, Sleepy Cat, nearer the scene of the fight, began sending in telegraphic reports in which truth and rumor were strangely mixed. McCloud waited at the wires all night, hoping for trustworthy advices as to the result, but received none. Even during the morning nothing came, and the silence seemed more omninous than the bad news of the early night. Routine business was almost suspended and McCloud and Rooney Lee kept the wires warm with inquiries, but neither the telephone nor the telegraph would yield any definite word as to what had actually happened in the Williams Cache fight. It was easy to fear the worst.

At the noon hour McCloud was signing letters when Dicksie Dunning walked hurriedly up the hall and hesitated in the passageway before the open door of his office. He gave an exclamation as he pushed back his chair. She was in her riding-suit just as she had slipped from her saddle. "Oh, Mr. McCloud, have you heard the awful news? Whispering Smith was killed yesterday in Williams Cache by Du Sang."

McCloud stiffened a little. "I hope that can't be true. We have had nothing here but rumors; perhaps it is these that you have heard."

"No, no! Blake, one of our men, was in the fight and got back at the ranch at nine o'clock this morning. I heard the story myself, and I rode right in to—to see Marion, and my courage failed me—I came here first. Does she know, do you think? Blake saw him fall from the saddle after he was shot, and everybody ran away, and Du Sang and two other men were firing at him as he lay on the ground. He could not possibly have escaped with his life, Blake said; he must have been riddled with bullets. Isn't it terrible?" She sobbed suddenly, and McCloud, stunned at her words, led her to his chair and bent over her.

"If his death means this much to you, think of what it means to me!"

A flood of sympathy bore them together. The moment was hardly one for interruption, but the despatcher's door opened and Rooney Lee halted, thunderstruck, on the threshold.

Dicksie's hand 'disappeared in her handkerchief. McCloud had been in wrecks before, and gathered himself together unmoved. "What is it, Rooney?"

The very calmness of the two at the table disconcerted the despatcher. He held the message in his hand and shuffled his feet. "Give me your despatch," said McCloud impatiently.

Quite unable to take his hollow eyes off Dicksie, poor Rooney advanced, handed the telegram to McCloud, and beat an awkward retreat.

McCloud devoured the words of the message at a glance.

"Ah!" he cried, "this is from Gordon himself, sent from Sleepy Cat. He must be safe and unhurt! Listen:

"Three of the Tower W men trailed into Williams Cache. In resisting arrest this morning, Du Sang was wounded and is dying tonight. Two prisoners, Karg and Seagrue. G. S."

(Continued Next Week.)

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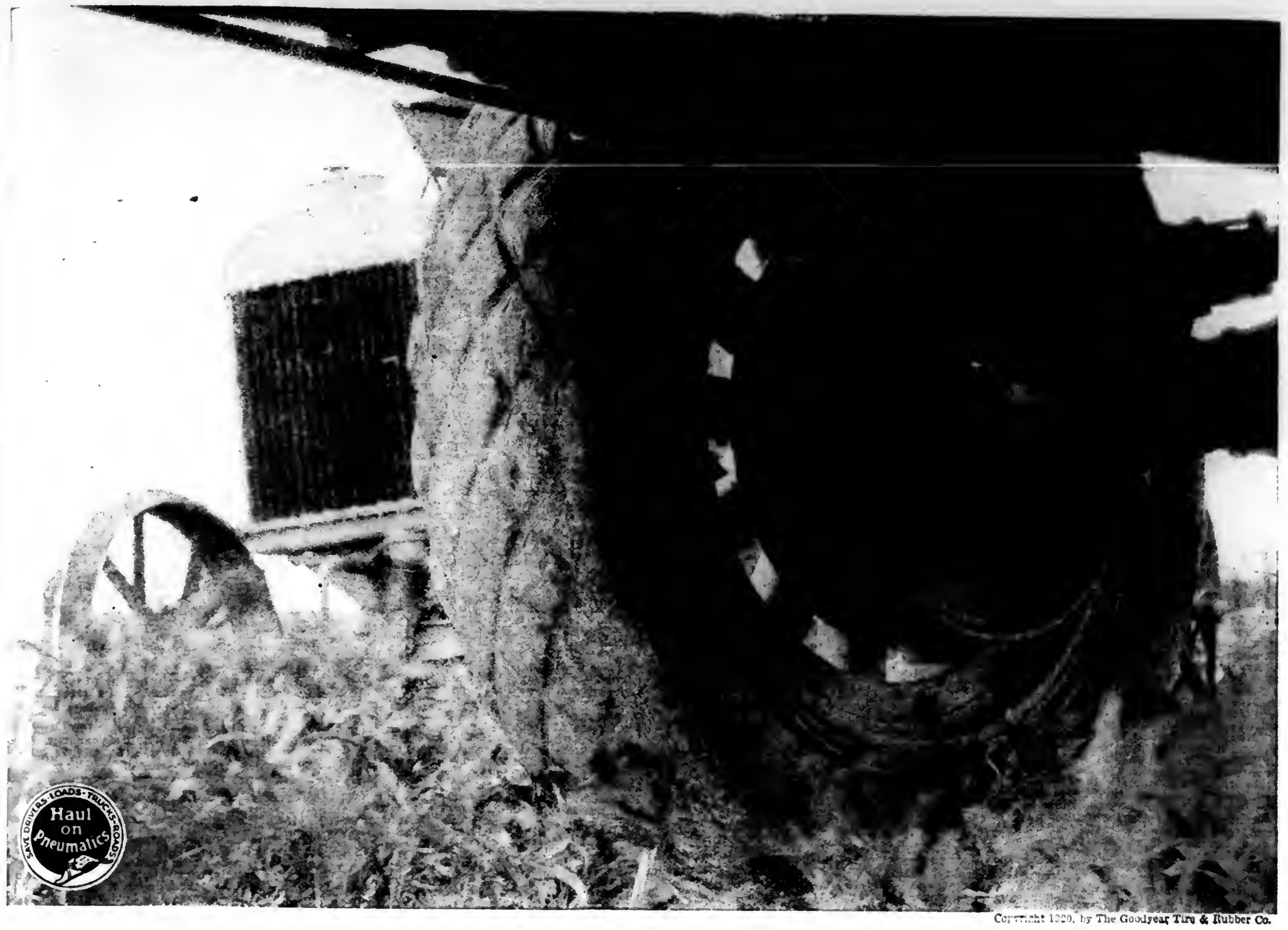

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GOODYEAR
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Markets

PHILADELPHIA PRODUCE

—Sept. 27, 1920

Potatoes are now very liberal. The market has been getting lower ever since our last week's report. There were well over 100 cars on hand today and the movement was only moderate and supplies did not clean up. N. J., Penn., and N. Y. are supplying the great bulk. N. J. long stock are selling at $2@2.40 150-lb. sack, with No. 2s at $1.13@1.25 per 150-lb. sack. The N. J. round stock is selling at $2.40@2.65 per 150-lb. sack, while the N. Y. states reach $2.75 per sack. Most of the Penn. potatoes are in bulk and selling at $1.35@1.65 per cwt. for the Lehigh County, while the Chester Countes and Bucks Counties are selling at $1.60@1.90 per cwt.

The potatoes hauled in by the nearby farmers are selling at 55@75c per ⅝ basket on No. 1s, with No. 2s at 30@45c per ⅝ basket. Enough sweet potatoes are coming from N. J. points to supply the market's requirements and sales are being made at from 50@90c per ⅝ basket for No. 1s, with No. 2s at 30@45c per ⅝ basket. A very few sweet potatoes are still coming from the Eastern Shore sections but they sell very slowly at $2.75@3.25 per barrel.

Vegetables.—Beans are in light supply, but most of them are of poor quality and prices are ranging from 25c@$1 per ⅝ basket on the green beans with wax at 50c@$1 per ⅝ basket. Beets are in fair supply and about steady at 40@65c per ⅝ basket and 3@3½c per bch. Cabbage is very dull and draggy with the nearby selling slowly at 13@25c per ⅝ basket and N. Y. state stock at $10@15 ton. Carrots are in moderate supply and firm at 50@90c per ⅝ basket as to quality.

Cauliflower from L. I. sells at $3 crate, while the cauliflower from the Buffalo section sells at $1@2.50 per crate. Celery is showing very little change in price but is moving slowly at 25@75c per bunch, with the rough unwashed celery bringing $3.25@3.75 crate. Celery hearts from nearby points are selling at 5@8c per bunch. Corn is in light supply but as much of it is poor prices are taking the wide range of 50@90c per ⅝ bask., for the N. J. corn, while the Penn. grown corn sells at $1@2.25 per 100 ears.

Cucumbers are coming principally from N. Y. and selling all the way from $1 up to $2.75 bush. as to quality, some being very poor and yellow. Egg plants are in moderate supply, but as many of them show poor and spotted condition the low price of 15@65c per ⅝ basket is prevailing generally. Lettuce is in light supply and firm when fancy at $2@2.50 box containing two dozen heads, but some is so poor as to bring only 25c@$1 box.

Lima beans are in good demand when fancy at $2.75@3.25 per ⅝ basket and $4@4.50 bushel hamper, while some lima beans are so poor as to move slowly at $1@2 per ⅝ basket and $2@3 hpr. Onions were much more plentiful today, there being some 10 or 12 cars here besides the nearby offerings, and as a result prices are lower best selling at $1.50@1.75 per 100 lbs. sack, with poorer at $1.15@1.25 sk., while the N. J. nbys sold at 40@65c per ⅝ basket.

Parsley is in ample supply and unchanged at $1@1.25 hpr. Peppers are weaker at 25@45c for the greens per ⅝ basket, with reds at 40@60c, and tomato peppers at 65@75c per ⅝ basket. Pumpkins made their appearance on the market last week and are selling at 25@35c per ⅝ basket. Radishes are also about and bring 1@2½c per bunch. Squash is in lighter supply and doing better at 35@60c per ⅝ basket. Tomatoes are much less plentiful and prices much higher than last week, most sales being made today at 75c@$1.50 per ⅝ basket with some fancy up to $1.75, and some poorer down to 35@40c per ⅝ basket. White turnips when fancy and washed are bringing 90c@$1 per ⅝ basket, while rough and unwashed are selling at 60@70c per ⅝ basket. Yellow turnips are about steady at 50c@75c per ⅝ basket. Spinach is in light supply and firm at 90c@$1 per ⅝ basket and $1.50@2 bu. box. A little watercress is also on the market and selling around 2@2½c bch.

Fruits.—All fruits are generally lower with the exception of Bartlett pears and grapes. Apples are very dull under very liberal supplies, there being about 75 cars here today, and the demand and movement was very slow. Bartlett pears are in light supply and fancy stock is wanted at top quotations. Other pears are about steady at the prices quoted. Cantaloupes are lower. N. Y. peaches are much more plentiful and lower. Grapes are in light supply. The range of values on the various kinds and varieties of fruits are about as follows: Apples: bbls.: Maiden Blush, $2.75@5; Grimes Golden, $3.75@5; Wealthy, $3.50@5.50; Pippins, $3@5; Twenty Ounce, $3.25@5; Rome Beauty, $4@4.75; Alexander, $4@5; Gravenstein, $4@5; Jonathans, $4@5.50; Delicious, $7@7.50; Other Varieties, $3@5. Apples Bushels: Alexander, $1@1.25; Maiden Blush, 90c@$1.25; Twenty Ounce, 75c@$1; Gravenstein, 75c@$1.10; Pippins, 50c@$1; Wolf River, $1@1.25; Ganos, 75c@$1.20; Other Various Varieties, 60@90c. N. J. ⅝ baskets 25@75c, a few fancy at $1. Crabapples, $1.50@2 per ⅝ basket. Cantaloupes, $2@2.50 per standard crate of 45 melons at 75c@$1.25 per flat crate of 12 to 15 melons. Honey Dew melons, $1.50 to $2.50 per crate. Plums, $1@2 bu. as to variety, quality, and condition, some being very poor, selling at 20@35c per 4-qt. bsk., as to quality and condition. N. Y. Peaches, 75c@$2.25 bu. N. J., 50c@$2.25 per ⅝ bsk. Pears: Bartletts, bu. No. 1s, $3.25@3.75; No. 2s, $1.75@2.75; Seckels, $1.75@3.50 per bu. Anjous, $1.35@2.25 per bushel; Sheldons, $1@2.25 bushel; Other varieties, $1.50@2 per bushel; Kieffer pears, N. J., ⅝ basket, 35@50c. Quinces, $1.50@2 per ⅝ basket. Grapes N. Y. state $1.25@1.40 per 20-pound basket and 25@28c per small pony basket. Nearby N. J. grapes, $2@2.50 per ⅝ basket. Cranberries, $2.25@2.75 per crate.

Poultry.—The market on live poultry has been ruling very firm and active with prices remaining practically unchanged from day to day. Fowls are selling at 32@42c pound as to size and quality, the fat heavy fowls bringing the extreme outside or top quotations. Roosters show no change at 24@26c pound. Fancy spring chickens are still selling at 38@42c per pound and broilers at 32@38c per pound. Ducks are firm at 30@34c per pound.

Eggs.—The market on strictly fancy fresh eggs is ruling very firm at full prices with exceptional and well known fancy marks bringing a premium over quotations which are about as follows: Penn. and other nearby current receipts 61c; firsts, 62@64c, ordinary to fair grades, 56@59c, and extra fancy well candled and selected, 73@74c. Western firsts are selling at 60@61c, and etxra firsts at 62@64c, with seconds, at 51@55c.

LANCASTER PRODUCE

—Sept. 27, 1920

Prices generally showed little fluctuation. Fruits and vegetables of all kinds were abundant and the demand was steady. The quotations:—

Butter and Eggs.—Creamery butter, 80c per lb.; country butter, 75@78c per lb.; fresh eggs, 73@75c per dozen; duck eggs, 68@70c per doz.; goose eggs, 6@7c each.

Poultry.—Dressed old chickens, $2@2.25 each; dressed young chickens, $1.75@2 each; squabs, 25@50c each.

Vegetables.—Green beans, 15@20c per hf. pk.; lima beans, 25@35c per qt.; cabbage, 5@10c per head; cauliflower, 10@25c per head; corn, 20@35c per doz.; celery, 10@15c per stalk; eggplants, 15@20c each; lettuce, 10@20c per head; potatoes, 25@30c per hf. pk.; do., $1.20@1.40 per bu.; sweet potatoes, 25@40c per hf. pk.; squashes, 10c each.

Fruits.—Peaches, $1.75@2.25 per basket; do., 10@15c per box; apples, 10@25c per hf. pk.; cantaloupes, 5@8c each; watermelons, 25@40c each; pears, 20@30c per hf. pk.

YORK PRODUCE MARKETS

—Sept. 25, 1920.

There is little change in the market situation. Altho the glut has disappeared in most of the perishable products, yet the price has not changed. The apple and potato outlook is pretty blue; with the exception of some small local sales, there is nothing whatever doing in the former.

Eggs.—68@72c per dozen.

Butter.—Country, 60@65c lb.; separator, 70@75c lb. Milk, 14c quart.

Poultry.—Hens, 28c; springers, 35c; dressed, $1@2.25.

Vegetables.—Potatoes, 10@25c ½ pk.; $1.50 bu.; lettuce, 5c hd.; cabbage, 5@10c hd.; beets, 5c bch.; radishes, 6c bch.; onions, 5c bch.; 20@25c ½ peck; corn, 20@40c doz.; lima beans, 30c qt.; string beans, 30c ½ pk., peas, 30c ¼ pk., egg plants, 5@8c each; peppers, 15@25c doz.; cucumbers, 75c@$1.25 per 100; squash, 3@5c each; sweet potatoes, 15c ¼ pk.; tomatoes, 10c bx.; 10@15c ¼ pk.; 25@60c basket; ham, 40@45c lb.; sliced, 45@85c; lard, 28c lb.

Fruit.—Apples, 20@40c ½ pk.; 10@15c bx.; pears, 15c ¼ pk.; 10@12c bx.; peaches, $1.50@1.75 basket; plums, 15c box; grapes, 10@15c box; 15c ¼ pk.

Retail Grain Market.—Wheat, $3; corn, $1.75@2; oats, $1, rye, $1.75; bran, $3 per cwt., middlings, $3.75 per cwt.

Wholesale Grain Market.—Wheat, $2.30; corn, $1.35; oats, 80c; rye, $1.40; bran, $55 per ton; middlings, $70 per ton.

BALTIMORE PRODUCE

—Sept. 25, 1920.

Butter.—Creamery, Western separator, extras, 59@60c; do., firsts, 57@58c; Western prints, ½ pound, extras, 60@61c; do., firsts, 58@59c; do., 1 pound, extras, 60@61c; do., firsts, 58@59c; nearby creamery, extras, 50@52c; do., firsts, 48@49c; dairy prints, Maryland, Pennsylvania and Virginia, extras, 39@40c; do., firsts, 37@38c; storepacked, 37@38c.

Eggs.—Western Maryland, Pennsylvania and nearby, firsts, 62c; Eastern Shore, Maryland and Virginia, firsts, 62c; Western (Ohio), firsts, 62c; West Virginia, firsts, 60c; Southern (North Carolina), firsts, 58@59c.

Live Poultry.—Chickens, Young, large, pound, 39@40c; do., small, poor, pound, 35@36c; do., old roosters, pound, 21@22c; do., old hens, over 4 pounds, pound, 38@39c; do., small, pound, 34@35c; do., white Leghorn hens, pound, 34@35c; do., young white Leghorns, 1½ pounds, pound, 35c, do., under 1½ pounds, pound, 34c. Ducks, Muscovey and mongrel, young, pound, 31@32c; do., white Pekins, young, pound, 35c; do., puddle, 4 pounds and over, pound, 33@34c; do., smaller, poor, pound, 28@30c. Turkeys, Choice, heavy, pound, 45@50c. Pigeons, old, pair 35@40c; do., young, pair, 35@40c. Guinea fowl, young, 1½ pounds, each, 75@80c; do., small, 1@1¼ pounds, each, 50@60c.

NEW YORK PRODUCE

—Sept. 25, 1920.

Butter.—Unsettled; receipts, 8,637 tubs. Creamery, higher than extras, 62½@63c; extra (92 score), 62c; first (88 to 91 score), 52@61c; packing stock, current make, No. 1, 42c.

Eggs.—Firm; receipts, 16,247 cases. Fresh gathered, extra firsts, 61@63c; do., first, 58@60c; state, Penna., and nearby western hennery white, first to extra, 78@88c; do., brown, extras, 70@75c; do., gathered, brown and mixed colors, first to extra, 58@68c.

Chese.—Irregular; receipts, 2,513 boxes. State, whole milk flats, current make, white and colored, specials, 29@29¾c; do., average run, 28@28½c; state, whole milk, twins, current make, specials, 28½@28¾c; do., average run, 28@28¼c.

Poultry.—Live, firm; chickens by freight, 37c; by express, 37@40c; fowls, 41@42c; old roosters, 22c; turkeys, 40c. Dressed steady and unchanged.

Potatoes.—Bbl. L. I., bbl., $3.50@3.75; Jy, round, 150 lbs., $2.50; Jy, long, $2.12; No. 2, 75c. Sweets, bskt., Jy, 1st, $1.50@2; Jy, 2s, $1@1.25. Brussels Spts, State, qt., 20@25c; L. I., qt. Beets, bbl., $2@2.50. Carrots, 100, $2@4. Corn, Jy, 100, $1@2. Celery, Crt., State, bch., 15@65c; Jy, bch., 15@65c. Cucumbers, State, bsk., $1@2. Cabbages, L. I., bbl., 50c@$1. Jy, bbl., 50c@$1. Cauliflowers, crt., $1@3.50. Eggplants, box, 50@75c. Lima Beans, Jy, bskt., $2@3; L. I., $2@3. Okra, crt., $1.50@2.50. Onions, Wh., bsk., 75c@$1; Yel., bsk., 75c@$1; Red, bsk., 75c@$1.25. Peppers, Green, bbl., $1.75@2.25. Red, bbl., $2.25@3. Pumpkins, cheese, $1.50@2; Yankee, $1.25@1.50. Squash, Wh., bbl., $1@2; Yel., bbl., $1@2. Turnips, White, 100 bchs., $2@4. Rutabaga, bbl., $1@1.50. Tomatoes, box, $1@2.50.

PHILADELPHIA LIVESTOCK

—Sept. 25, 1920.

Receipts of the week ending Sept. 25th, 1920, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Totals for week	2,796	9,403	8,009
Previous Week	2,392	8,384	7,845

Calves.—Receipts of calves were 1,696 head against 1,505 head previous week.

Beef Cattle.—Choice stock firmly held, but unattractive qualities little wanted and easier. Quotations: Steers, good to choice, $14.50@16.50; fair to good, $12@14; common to fair, $11@12; cows, good to choice, 8½@10c; do., fair to good, 7@8½c; bulls, 7@9½c; calves, extra to choice, $19@20; fair to good, $17.50@18.50; common, $12@13; Tennessee, $17@18; other southerns, $8@13.

Sheep and Lambs.—Fine sheep firmer. Lambs quiet and easier, with buyers given preference to fine West Virginia stock. Quotations: Sheared sheep, wethers, extra, $9.50@10; do., good to choice, $7@8; medium, $5@6; do., common, $2@3; ewes, heavy, fat, $6@6.50; lambs, spring, choice, West Virginia, $14.50@15; choice, Penna., $14@14.25; medium, $11.50@13; common, $8.75@10.25.

Hogs.—Steadily held but quiet. We quote: Best western, $20; good, nearby, $18@18.50.

City Dressed Stock.—Quiet, but offerings light and values generally well maintained, with hogs a shade firmer. We quote: Steers, 22@30c; heifers, 18@26c; cows, choice, 18@21c; cows, light, 12@16c; calves, city dressed, choice, 30@32c; calves, country dressed, 27@29c; lambs, spring, choice, 28@32c; sheep, 10@20c; hogs, 27c.

NEW YORK HAY AND GRAIN

—Sept. 25, 1920.

Feed.—The market for mill feed was quiet and the tone was easy. Buyers were very apathetic owing to the declining tendency of feeding grains and the general disposition to cut prices of commodities.

Quotations: City feed bran, $50; middlings, $58, in 100-pound sacks; red dog, $82, nominal, in 100-pound sacks; Western spring bran, $48; standard middlings, $56; flour middling, $64; red dog, $79.75, all in 100-pound sacks, 30-day shipment. Oat feed, $30; rye middlings, $55; white hominy feed, $58, all in 100-pound sacks. Cottonseed oil meal, $60.50; linseed oil meal, $60, in 100-pound sacks.

Hay and Straw.—Offerings continue liberal at most Manhattan points and stocks are showing tendency to accumulate in Brooklyn under a dull trade. Buyers are pounding the market and values are tending steadily downward. Sound hay is selling all the way from $30@44, with several cars of strictly No. 1 in big bales held at $45. Straw scarce and firm.

Hay.—Large Bales. Timothy.—No. 1 $45; No. 2, $40@42; No. 3, $37@39; Shipping, $35@37; No grade, $30@33.

Clover, Mixed.—Fancy, $40@41; No. 1, $37@39; No. 2, $34@36.

Straw.—Large Bales. No. 1 rye, $26. No. 1 oat, $20; No. 1 wheat.

Wheat.—No. 2, red, c. i. f., $2.49; No. 2, hard winter, $2.49.

Corn.—No. 2, yellow, $1.35.

Oats.—No. 2, white, 69@70c; No. 3 white, 68@69c; rye, c. i. f., $1.90; barley, feeding, $1.04@1.09.

PITTSBURGH HAY AND GRAIN

—Sept. 25, 1920.

Receipts of hay have been quite heavy during the last few days and more than equal to the demand. Not much call for anything outside of strictly No. 1 Timothy, No. 1 clover and No. 1 clover mixed. The following prices can be realized:

No. 1 Timothy, $34@34.50; Standard Timothy, $32@32.50; No. 2 Timothy, $29.50@30.50; No. 3 Timothy, $26@27; No. 1 Light Clover Mixed, $30@31; No. 1 Clover Mixed, $30.50@31.50; No. 1 Oat Straw, $17@17.50; No. 2 Oat Straw, $16.50@17; No. 1 Wheat Straw, $16.50@17; No. 2 Wheat Straw, $16@16.50; No. 1 Rye Straw, $17@17.50; No. 2 Rye Straw, $16.50@17; New No. 2 White Oats, 65@66c; No. 2 Yellow Ear Corn, $1.35@1.40; No. 2 Yellow Shelled Corn, $1.38@1.39.

PHILADELPHIA HAY AND GRAIN

—Sept. 25, 1920.

Baled Hay and Straw.—Receipts, 144 tons of hay and 14 cars of straw. Quiet but firmly held. Quotations were as follows: Timothy hay, No. 1, none here; No. 2, $31@32; No. 2, $27@29; sample, $23@25; no grade, $30; No. 1 mixed, $27@28. Straw.—No. $18@21; clover-mixed hay, light mixed, $29; 1, straight rye, $19@19.50; No. 2 do., $17@18; No. 1 tangled rye, $16@17, No. 2 do., $15.50@16; No. 1 wheat straw, $16@17; No. 2 do., $15.50.

Bran.—Dull and prices favored buyers. We quote: Car lots, including sacks: Soft winter bran, western, in 100-lb. sacks, per ton, $50.50@51; spring bran, in 100-lb. sacks, per ton, $49.50@50.

Corn.—No. 1 yellow, $1.38@1.42.

Wheat.—New; No. 2 red winter, $2.43@2.48. No. 2 red winter, garlicky, $2.33@2.38.

Oats.—No. 2 white, 68@69c; No. 3 white 67@68c.

PHILADELPHIA DAIRY MARKET

—Sept. 25, 1920.

Butter.—Receipts, 894 tubs. As usual on Saturday, dealers were looking after their retail business and the wholesale market was virtually neglected. Prices showed no important change. Fresh, solid-packed creamery, high scoring goods, 64½@66½c, the latter for jobbing sales; extra, 63½c; do., extra firsts, 60@63c; firsts, 52@57c; seconds, 47@51c; sweet creamery, choice to fancy, 65½@67½c; fair to good, 58@64½c; ladle-packed, as to quality, 44@47c; packing stock, 39@42c; fancy brands of nearby prints were jobbing at 71@74c; good to choice, 63@70c; fair, 60@62c.

Cheese.—Well cleaned up and firm. We quote: New York, whole milk, current make fancy flats, 29¼@29¾c; common to fair, 25@29c; Longhorns, 29½@30c; single Daisies, 29½@30c; jobbing sales of fancy goods, 32@33c.

LIVESTOCK MARKETS

—Sept. 27, 1920.

LANCASTER

Cattle.—Receipts, 3,435, against 3,761 head last Monday; prices lower; butchers by 75c; trading slow; steers, good to choice, $13@14.75; fair to good, $11@13; medium, $9.25@11; common, $8@9.25; bulls, fair to good, $8.50@10; medium, $8@8.50; common, $6@8; heifers, good to choice, $11@12; medium, $8.50@9.50; common, $6.50@8.50; good to choice cows, $8.50@10.50; medium, $7@8.50; common, $5.50@7; canners and cutters, $3.50@5.50; feeding steers, good to choice, $10.50@12; fair to good, $9@10.50; common, $7@9; stock steers, good to choice, $9@10.50; fair to good, $7.50@9; common to fair, $5@7.50; stock bulls, good to choice, $8.50@9.50; fair to good, $7.50@8.50; common to fair, $5.50@7.50; stock heifers, good to choice, $8.75@10; fair to good, $7@8.50; common, $5.50@7.

Calves.—Receipts, 279 head; prices steady; good to choice, $17@19; medium, $12@17; common, $6@12.

Hogs.—Receipts, 129 head; market firm; best grade, $18.50@19.75; light weights, $17@18; roughs, $12@13.

EAST BUFFALO, N. Y.

Cattle.—Receipts, 4,400; slow; heavy and butchers, 15@25c lower; light and common, 25@75c lower; shipping steers, $16@17; butchers, $9@15; yearlings, $15.50@17; heifers, $6@12; cows, $7.50@10; bulls, $5.50@9; stockers and feeders, $5.50@9; fresh cows and springers, $5@10 lower at $65@130.

Calves.—Receipts, 1,700; steady at $6@19.50.

Hogs.—Receipts, 11,200; pigs, 25@50c lower; others, 15c lower; heavy, $18@18.25; mixed and yorkers, $18.25; light do., $17.50@18.25; pigs, $17.25@17.50; roughs, $14.25@14.50; stags, $9@11.

Sheep and Lambs.—Receipts, 9,600; lambs, 50c lower; lambs, $7@14.75; yearlings, $6@10; wethers, $7.50@8; ewes, $3@7; mixed sheep, $7@7.50.

NEW YORK MILK MARKET

—Sept. 27, 1920

Receipts abundant to supply the retail demand which is only fair. Wholesale demand almost nominal with virtually nothing being taken by sweetened condensed milk manufacturers. Surplus increasing and quite a number of distributers making butter and cheese. The Dairymen's League has fixed the price for 3 percent milk in 200-mile zone for October at $3.85 per 100 lbs., an increase of 20c per 100 over the September rate; but distributers protest against the advance and altho several meetings have been held, no agreement has been reached as yet.

Receipts of milk and cream in 40-quart cans for the week ending September 25th, 1920, were as follows:

Railroad	Milk	Cream
Erie	40,160	4,020
Susquehanna	8,275	132
West Shore	14,724	1,975
Lackawanna	55,762	2,817
N. Y. Central (long haul)	195,780	4,119
Ontario	46,277	1,895
Lehigh Valley	53,989	1,041
New Haven	6,900	70
Pennsylvania	12,914	475
Other Sources	6,200	250
Totals	440,981	16,794
Same week last year	403,248	15,891

INTERSTATE MILK PRICES

—Sept. 27, 1920

August milk prices continue in force for September.

TOBACCO MARKET

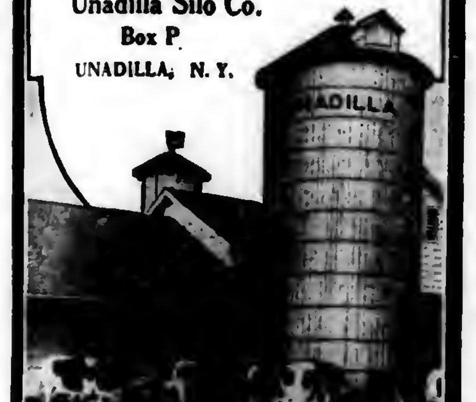
—Sept. 27, 1920

Tobacco market circles were concerned with the investigation by the Federal Trade Commission of the tobacco manufacturing industry of the country. Growers have complained that the difference between price paid them for raw material and the price of manufactured tobacco in altogether unfair and excessive and additionally thus since market has opened for the sale of 1920 crop.

It is reported that in North Carolina prices are fifty percent below those of last year and that growers have thus been driven to desperation. Thousands of growers, it is said, have refused to accept prices offered, and have hauled their tobacco back to the farm.

Indignation meetings have been held at many points in that section and auction sales were forced to discontinue by the fury of the farmers. It is claimed that the principal if not the sole reason of the unfortunate situation is the inability of independent manufacturers to finance their purchases as usual thus leaving matters at the mercy of the four large concerns known as "the trust." It is also claimed that buyers instead of bidding against each other as heretofore now have an agreement whereby no two of them would bid on the same grades at the same time.

Altho the buyer has the product entirely at his mercy as the latter is neither prepared nor financially able to hold his product after it is ready for market. On the above account an investigation has been granted and is now being conducted at several points including Maysville and Mount Sterling, Ky., both of which are prominent market points in the great burley tobacco section. The results of this investigation will be made known to the public when Congress reconvenes in the month of December. If the accused is guilty prosecutions will follow.



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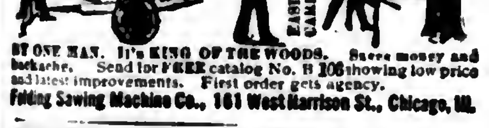

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FARM PRICES AND PROSPECTS

FOREIGN WHEAT DEMAND SLACKENS

Foreign demand for wheat has been much less active and Liverpool reports that the United Kingdom has enough wheat on hand to last to February 1, 1921. In view of the amount of exports already made and of the sales for future shipment, it will not take large purchases to absorb the remainder of the surplus in this country. Flour buyers have been holding back waiting for lower prices and banks have been unwilling to finance big purchases to supply long distance needs. The demand from mills will help to support the price level in case the foreign demand subsides, but the buoyancy which has characterized the market during the past six weeks may not be so evident. That mills want wheat is indicated by the fact that over 1,000,000 bu. Canadian Northern Spring have been purchased by Minneapolis and eastern plants, owing to inability to buy enough choice grain in this country. Because of the difference in exchange Canadian grain is worth just about as much as in this country, altho the quoted prices make it appear higher.

The holding tendency on the part of the producer is the main factor in holding down receipts which have become relatively small from the winter wheat sections. Red Winter is scarce and prices in the southwest advanced to around 10 to 12 cents premium over Chicago. The Spring wheat is being marketed slowly altho the movement in the northwest is usually the largest of the season at this period.

Indications point to an increased acreage in the southwest where seeding is progressing rapidly and the crop is getting a good start. Soil conditions there are excellent and talk of $3 wheat is common. In the Hession fly territory seeding is being delayed until a little later in the season.

LOWEST PRICES ON CORN IN THREE YEARS

New crop deliveries of corn have declined to the lowest figures since November, 1917, and with excellent weather of late for maturing the crop and a slow demand for the cash grain, there seems to be nothing in sight on which the producer can pin faith in a higher level of prices ultimately. The price of cash corn has dropped over 50c from the recent high point, and a great deal of grain was sold by producers the past week indicating a change in their ideas as to the outlook for the new crop. Up to the past week the country reports were generally pessimistic over the frost outlook, but a few days of dry and hot weather led to a marked change in the character of the news.

That there will be much soft grain this season regardless of weather conditions from now on is generally admitted, but at the present time this feature in the situation is being ignored, and it will probably continue to be until after the first killing frost, the average date of which in the states of largest production is still 2 to 3 weeks away. The average amount of merchantable corn the past ten years has been 2,211,000,000 bushels. With a 3,131,000,000 crop forecasted the amount of frosted corn might be considerable and yet leave more than an average amount of merchantable corn. Market history shows also that in soft corn years the amount reaching terminals has been larger than in years in which the crop matured more completely.

SHRINK IN LAMB RECEIPTS OFFSET BY NEW ZEALAND CARGO

Receipts of live muttons at leading markets have run about eleven percent less than a year ago. During August there was a falling off of 23.6 percent. During the last two weeks the run has dwindled to about 60 percent of that of a year ago when the range was affected by drouth. An unusual percentage of the western run is coming in feeder condition indicating that the best of the western run has been garnered. Bucky native lambs are being discounted 50 cents to $1.

Another cargo of New Zealand frozen lamb arrived last week bearing 203,562 carcasses, probably a greater tonnage of dressed product than the ten market supply for the week furnished. L. F. Swift told representatives of the producers a few days ago that these importations had not done a great deal of damage. Since lamb prices were much higher than cattle or sheep last winter before these importations began, whereas now the Chicago top on cattle is $18.50, on hogs $18 against a top of $14.25 on lambs.

FOREIGN PROVISION BUYING DESPITE EXCHANGE SLUMP

The break in sterling and other foreign exchanges does not seem to have checked reports of foreign buying of hog products to any great extent. The total movement abroad is not of large volume, but with the reduction in the hog supply and expanding domestic trade even at higher prices, the accumulations are being whittled down. During August the lard stock decreased 10.8 percent, pickled pork 73 percent and dry salt pork 16.9 percent. Packers seem to be more optimistic over the chance of disposing of the surplus.

CORN BUYERS WAIT FOR LOWER PRICES

The demand for cash corn of late has been very slow. Industries are grinding at either reduced capacity or have shut down. Some of them closed several weeks ago, and the burden of carrying the cash grain has been placed on the speculator. The price has dropped to a point where little better than $1.10 could be obtained at loading points in Illinois and some grain had to be sold for less. The southwestern and western markets went to a discount under Chicago, and at the close of the week the latter was about the highest market in the country and getting on an average of over 200 cars per day. The financing of this grain is quite a problem, as the banks are not disposed to loan freely. The lowering of the price, however, has been of some assistance. It is expected that the movement of the old crop will continue liberal for some time, as the country seems determined to liquidate its old grain apparently, regardless of price. Producers have become concerned over the outlook for consumption of the big crop and the old corn reserves.

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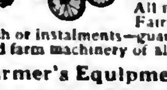

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TIFFANY'S SUPERIOR DUCKS Mammoth Pekin, Giant Rouen, and Indian Runner Ducks and Drakes, $2.50 each and up. Aldham Poultry Farm, R 37, Phoenixville, Pa.

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter. SELBY PRODUCE CO., PHILADELPHIA

Silver Spangled HAMBURG COCKERELS, 14 weeks old, $3.00 each. PERLEY W. LAWTON, Tiadaghton, R. I. Pa.

Swine

CHESTER WHITE PIGS.—A fine lot now ready to ship, either singly or in pairs. R. L. MUNCE, Canonsburg, Pa.

Reg. Duroc Jersey male pigs, 8 weeks old. Orion Cherry King lines. ROLAND G. & KENNETH E. LAY, Newville, Pa.

Big Type Poland Chinas All ages. Write your wants. KEYSOR & CLELAND, GREENWICH, OHIO

HAMPSHIRE SWINE LOCUST LAWN FARM, Bird-in-Hand, Box 2, Pa.

REG. BIG TYPE POLAND CHINA pigs, $15.00 each, first of November delivery. C. E. SECHLER, MARKLETON, PA.

REG. O. I. C'S, all ages. Open and bred gilts at prices to move them. Black Diamond Minorca Farm, Mt. Bethel, Pa.

NELSON'S BERKSHIRES, 5 spring boars with size and quality. Also gilts. Satisfaction guaranteed. W. D. NELSON, Jr., MARSHALLTON, DEL.

Big Type Poland China. Sired by Chief Lad, a grandsire of Mountain Giant, the $5,000 h[illegible]. Papers fur[illegible]. Satisfaction guaranteed. J. S. Funston, Amberson, Pa.

Chester Whites and HAMPSHIRE SHEEP. Write your wants. We can please you. TWIN BROOK FARM, Newville, Pa.

TELL the advertiser you saw adv. in Pennsylvania Farmer.

COUNTY NOTES

Blair Co., Pa.—The weather is fine here for maturing the late corn crop. There is no corn cut off yet as the farmers are all busy making cider and apple butter. There is not much seeding done. Have had no frost as yet. The retail markets are: Wheat, $3.50 per bu.; corn, $2.25 bu.; oats, $1.25. Eggs, 70c doz.; chickens, old, 35c lb.; young, 40c. Apple butter, $1.60 per gallon.H. M. McVey.

Union County, Pa.—Some wheat has been sown, but the job will last all this month on some farms. Silo filling has begun and will be done for the next two weeks, as some farmers will not fill until wheat is seeded. Clover seed is being cut, and the crop will be larger than we have had in the county for a few years, as it appears to be fairly well filled and the rains made a big growth of clover. Potatoes have blighted some, but the early ones escaped pretty well and are keeping. The price has dropped to 75 cents per bushel and slow sale at that. Some corn has been cut, but not well enough matured to be put into shocks. It is hard to get a threshing rig to thresh seed wheat on some farms. Rigs are not so plenty as they were 25 years ago, and a good many rigs have changed owners the past few years, in spite of the fact that more than twice as much per bushel is charged as was paid five years ago. Many public sales of milk cows are being held in the county and four car loads were sold at that many different sales last week. Pasture being good and a big crop of corn in sight, farmers are buying all the cows they can care for at present. One car load sold at an average of near $200 for all grade Holsteins, but two which were registered.—J. N. Glover.

Lebanon Co., Pa.—Fine seasonable weather prevailing this month. Some farmers are fearing an early frost but most signs point to a late September or early October one. Corn is coming along fast and will be a bumper crop. Filling of silos will start in several days. Many are threshing wheat and oats at this time. Wheat is yielding somewhat better than expected, kernels being large and heavy. Oats also do well. Potatoes are being dug and give bumper yields. One farmer harvested 950 bushels from 3 acres. Tobacco is being cut this week. Quality is variable; some being large and heavy, other fields small and poor. Plowing for fall seeding continues with many of "Our Folks" using tractors for this work. Our county Fair was a big success. Many of us are going to the big Lancaster Fair.—Leonard F. Strickler.

Cumberland Co., N. J.—Clear and cool. Tomatoes have sold as low as 8c a basket. Silo filling has commenced. Charles Dickinosn had the misfortune to loose a horse, it's leg was broken by an auto while at the factory with tomatoes and the horse had to be killed. Market for beans good. They sell for $1.00 a hamper. Cantaloupes 75c a basket.—C. J. S.

Mattawana, Pa., Mifflin Co.—Weather has continued wet for the last month. There is a lot of plowing to do yet for wheat. Most of the potatoes are to dig yet, and by some farmers are counted a small crop. Farmers are filling silos, most corn rather green yet. Will be a heavy crop. Oats are yielding big; wheat not so good. Several car loads of cows and sheep have been shipped from this place, for which high prices have been paid. Cattle are looking well. Pasture is very good. Apples will be plenty and peaches are a good croj. New wheat, $2.25; corn, old, $2.00; oats, 75c; potatoes, 55c a pk; apples, 20c; peaches, $2 a bu.; butter, 60c; eggs, 50c; grapes, $1.50 a bu. chickens, 35c a lb. All kinds of business in full blast.—J. H. Byler.

Mercer Co., N. J.—Here in northern Mercer county, N. J., dairy farming is the principal type, although fruit growing is becoming important. Hay crop was good and well gathered, there will not be a large second crop. Corn is looking very good. Wheat was a very poor crop, having wintered out. Owing to the late spring, much oats was got in late, but in general the crop is pretty good. Early oats gathered safely, but most of the crop is now sprouting in the shock, and some is still uncut. It has rained nearly every day since early August. Tomatoes for the cannery were troubled with aphis, and are now bothered with rot and blight. Not many potatoes grown, but late ones are rotting in the ground to some extent. Apples heavy crop; peaches, average crop. Labor is short, feed is high and in lines scarce. Milk was 10c quart in August, the shipping rates have been increased. Fertilizer higher than ever. Good new hay is slow sale in Trenton at $25 per ton Many farms idle, some half worked. It is generally considered a good time to be careful. Plowing and threshing held up by wet weather.—R. L. S., Aug. 28, 1920.

FATHER

Used to wonder just why father
Never had much time for play.
Used to wonder why he'd rather
Work every minute of the day.
Used to wonder why he never
Loafed along the road an' shirked;
Can't recall a time whenever
Father played while others worked.

Father didn't dress in fashion,
Sort of hated clothing new,
Style with him was not a passion,
He had other things in view.
Boys are blind to much that's going
On about 'em day by day,
And I had no way of knowing
What became of father's pay.

All I knew was when I needed
Shoes I got 'em on the spot;
Everything for which I pleaded
Somehow father always got.
Wondered, season after season,
Why he never took a rest.
And that I might be the reason
Then I never even guessed.

Saw his cheeks were getting paler,
Didn't understand just why.
Saw his body growing frailer,
Then at last I saw him die.
Rest had come. His tasks were ended,
Calm was written on his brow;
Father's life was big and splendid,
And I understand it now.

AGRIGRAPHS

This fall is a good time to plant shrubs and perennial plants. Larkspur is good for a blue background.

Seed corn selected in the field where it grew can be judged on how it performed in competition with neighboring stalks.

After the farm implements are sheltered for the season, axe and saw help make farmers independent of the coal shortage.

Lack of Help—Dispersal Sale
Herd Boar, Huntington Supurbus Lad 244531. Sow, Valley Farm Holyrood 245784. Two Gilts, farrowed March 23, 1920 not registered. Sow, Valley Farm Empress 245727 with litter of six, farrowed July 27, 1920. Sow, Valley Farm Empress 2nd, 245778 with litter of six farrowed July 27, 1920. Sow, Huntington Belle 2nd, 293105. Sow, Huntington Lady 293100. A splendid chance to purchase twenty high grade Berkshires at reasonable prices.
Huntington Valley Farm, Huntington Mills, Pa.

READY WEEKLY 125 PIGS
75 Chester and Yorkshire Cross. 50 Chester and Berkshire Cross farrows—sows or boars, 6 to 7 weeks old $6 each; 8 to 10 weeks old $7 each. Boars $8. These pigs are the result of several years of selective breeding and show the blood value of big type registered boars. They have the bone, back, and barrel of the purebred, feed easy, grow fast, dress light. Shipped on approval. Pay C. O. D. if satisfied. Reference Waltham National Bank
SUBURBAN LIVE STOCK CO., Waltham, Mass.

DUROC JERSEYS
Twelve weeks old. High Class. Finest Breeding Both Sexes Price Reasonable.
R. D. Harrison, Huntington Mills, Pa.

HAMPSHIRES
All ages. Strong and vigorous stock. When you buy you want the best, don't you? Then write us. Inspection invited. ROSS B. WITMER, LAMPETER, PA. Member Lanc. Hampshire Breeders' Co-operative Association.

Arcadia Farm Chester Whites
A choice lot of young boars and gilts on hand. Also some small pigs. Bloodlines of Petroleum Giant, Combination Defender, Schoolmaster, Budd Weddle, etc. Exceptional quality. Reasonable prices. ARCADIA FARM, Box D, Bally, Pa.

REGISTERED DUROC-JERSEY PIGS
$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs. C. W. Ellis, Jr., Maple Lawn Farm, Cortland, N. Y.

Fashion Herd of Poland Chinas
Fashion Giant and Ohio King, our 1,000 lb. boars of advanced breeding. Sows, bred pigs in pairs, not akin, out of 700 and 800 lb. sows. Address
C. S. EPPLEY, ZANESVILLE, OHIO

REGISTERED O. I. C.'S
All ages. Bargains in bred gilts and boars of all ages. We are overstocked and the price is right.
ELM GROVE STOCK FARM, Cortland, N. Y.

CRYSTAL SPRING STOCK FARM, Seelyville, Pa. Offer 20 registered Berkshire gilts of April farrow weighing 185 to 200 pounds, by Symboleer's Masterpiece, the wonder boar and son of our American Champion, Symboleer's Junior. 2 boars suitable to head the best herds anywhere.

EDGEWOOD HAMPSHIRES
Everything sold. Booking orders for gilts bred for fall farrow, and pigs for Pig Club work only.
DEPEW HEAD, MARION, OHIO

FOWLER'S PURE BRED HAMPSHIRES
Will please you.
Best and largest herd in East.
THE FOWLER FARMS, MACUNGIE, PA.

REG. DUROCS. Several Sows and service boars for sale. Also good spring boars. Good type and breeding. Northumberland Co. Duroc-Jersey Breeders' Assn., J. M. Fry, Corresponding Secy., Sunbury, Pa.

Large Type Reg. Berkshires of all ages for sale. Select a breeder from a large litter. Pay when you see stock. No cash in advance. DAVID WIANT, HUNTINGTON MILLS, PA.

Reg. Berskshires with size and quality; long bodies, good in back and legs. Spring pigs and bred sows. NEARBY STOCK FARM, POTTSGROVE, PA.

Special Sale REGISTERED DUROC SOWS bred for Summer farrow, $65.00 each, registered and express paid. BELROSE FARMS, RICHFORD, N. Y.

O. I. C.'s 2 registered boars, born May 30, 1920. Register numbers [illegible] and [illegible]. HOWARD G. BINKLEY, SAFE HARBOR, PA.

HEAD YOUR BERKSHIRE HERD with a son of Highwood Majestic 12th. I have five from spring farrow. Write for prices and pedigrees. MARVIN BEACH, FRANKLIN, N. Y.

BERKSHIRES that make satisfied customers. The Barnes Purebred Stock Farm, Grove City, Pa.

O. I. C. Males 2 to 4 months old. Satisfaction guaranteed. BRUBAKER BROS., Star R, Cocolamus, Pa.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, Center Valley, Pa.

REG. O. I. C. PIGS, Aug. 1st farrow. Quality guaranteed. Two gilts, 7 months old. L. D. LAUSHEY, SMOKETOWN, PA.

REG. LARGE ENGLISH YORKSHIRES. Short nose, good length, prolific and quick-growing type, fall pigs for sale. J. Homer Reams, Luthersburg, Pa.

CHESTER WHITES For Sale. Service boars and young pigs, all ages. ALLAN R. MORTON, ASHVILLE, N. Y.

Reg. O. I. C.'s Booking orders for early Sept. pigs. Prices reasonable. BENJ. H. RUTLEDGE, Honesdale, Pa., R. 1

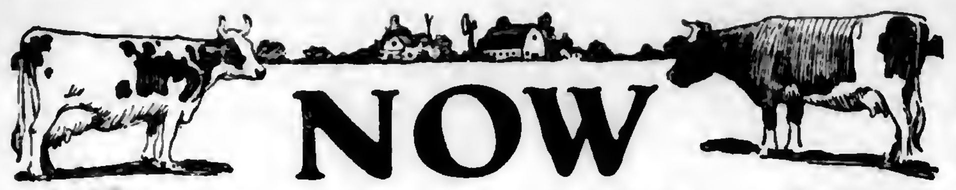
REGISTERED BERKSHIRE MALE PIGS. 6 to 10 weeks old, $10 each. GLEN DALE POULTRY FARM, Dillsburg, Pa.

For sale, the big type Flemish Giants, also high class New Zealand Reds; and R. R. Belgian Hares; Guinea Pigs, Ferrets; Pigeons; White Mice and Rats; Thoroughbred dogs, puppies a specialty; Blooded hogs. Write for prices. 10c for booklet. MOHAWK RABBITRY, Dep't. O. Indianapolis, Ind.

HOUNDS
Fox, Coon, Skunk, and Rabbit Hounds; also puppies and started dogs. Buy now and know your dog when the season opens. Stamp for reply.
H. C. LYTLE, Fredericksburg, O.

Glimpses of the Ohio State Fair

1—North End of Large Horticultural Building.
2—First Prize 3-year-old Percheron Stallion.
3—East End of Coliseum. Seating Capacity, 6,000. Comfortable and Well Lighted. Is Used for Mass Meetings and Fine Stock Judging.
4—Grand Champion Dorset Ewe. One of the 2,000 Head of Sheep on Exhibition.
5—A Section of the Corn Show. The Exhibit of all Grains was Unparalleled.
6—The Beautiful Driveway in Front of the Administration Building.
7—East Entrance to Administration Building, a Beautiful and Commodious Building
8—Boys and Girls are Taught How to Judge Beef Cattle.
9—Fine Riding Horses and Good Riders Show How Hurdling is Done.
10—One of the Covered Cement Walks which Connect all the Buildings, Making it Possible to See the Fair Even on a Rainy Day.
11—Junior Champion Poland China Boar.
12—A Small Section of the Many Acres of Farm Machinery Exhibited.
13—The Grand Champion Hereford Bull, "Capper Fairfax."
14—A Section of the Girls' Canning Exhibit Which was Made Up of the Work of Girls from 55 Counties.



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For Better Cows and More Milk

To put your cows into the barn in best condition and assure the biggest milk flows throughout the winter feed them International Special Dairy Feed *NOW*—and from now *on.* International Special Dairy Feed keeps cows in best condition and makes them give more milk throughout the milking period. The cost of this feed is more than covered by your profits from more milk. Better herd condition means extra profit. These are facts to which thousands of dairymen testify.

FEED

International Special Dairy Feed

This feed is guaranteed to produce more milk than any other feed of similar analysis. A million dollar corporation backs this guarantee with their capital and reputation.

International executives and salesmen are experienced practical feeders. There is no guesswork about any International Feed. When one man can take 40 grade cows and get an average of 6000 lbs. of milk per cow from them in a year, as did one International Special feeder, *you can do it.*

Order your trial ton today from your dealer or from us—and put it to the test.

INTERNATIONAL SUGAR FEED CO.
Minneapolis - Minnesota
Mills at Minneapolis and Memphis
Live Agents Wanted

GUERNSEYS

The Guernsey is the only breed of dairy cows that combines quantity and quality in milk production. Send for "The Story of the Guernsey." It's free.

The American Guernsey Cattle Club
Box M 87 Peterboro, N. H.

QUALITY ECONOMY QUANTITY

60 Registered Holstein Friesians 60

York County Breeders Second Annual Sale at the Fair Grounds, Friday, October 8th, 1920, last day of Ye Grand Old York Fair. All over 6 Mo. Tuberculin tested. Plan to come to this great sale. Send for catalog.

H. N. Forry, York, Pa.
S. N. Miller, Chambersburg, Pa.
Sale Committee

MAPLE LAWN HOLSTEINS

High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.
C. W. Ellis, Jr., Maple Lawn Farms, Cortland, N. Y.

Registered and Grade Holsteins

Get busy you calf club promoters. I have 50 registered heifer calves, 3 to 10 months old, $100 each for the lot, choice $125.00. 200 registered and high grade cows, heifers and bulls. Car of any age that you want. ⅞-Holstein heifer calves, $20 each. Express paid in lots of 5.
J. C. Reagan, Tully, N. Y.

FOR SALE KING OF THE MAY

Golden Secret Bull Calf. Price $200. Sired by Brookmeads Royal Master of Riverview who is brother to the great bull, Lanswater Stars and Stripes 2nd and grandson of the famous Imp. King of the May, who now has thirty A. R. daughters who exceed 622 lbs. butterfat and is also sire of Dolly Dimples May King of Lanswater. Calf beautifully marked, out of a cow who is really a show cow. First check takes him. Satisfaction guaranteed or money returned.
RIVERVIEW FARMS
SWARTHMORE, (Delaware Co.) PA.
12 Miles from Phila.

Milking Shorthorns Six young males, sired by Royal Crawford, one of the Glenside herd bull. These youngsters have good dams also show uniformity as to color and breeding. F. N. HUBBARD, TROY, PA.

Reg. Holstein Bull Calves, from officially tested dams and a 30-lb. sire. Write for prices, pictures and pedigrees. Walter M. CRUTTENDEN, Forty Fort, Pa.

Reg. Holstein Bulls from calves to serviceable age. Herd tuberculin tested under Federal and State supervision. BONNYMEADS Farms, Harrisburg, Pa. R. 1

REG. SHORTHORNS FOR SALE. Cows with calves; heifers, bred and open; also some choice young bulls. Farmers' prices. R. H. LYLE, CADIZ, OHIO.

CONSIGNMENT SALE

of Registered and A. R. O. Holstein Friesian Cattle, Oct. 6 and 7, 1920, at the HORNLESS HOLSTEIN FARMS, Clarks Summit, Pa., 10 miles north of Scranton, Pa., on the D. L. & W. Railroad and the Northern Electric Railway. ABOUT 100 HEAD. MANY of them are sired by the BEST DAMMED BULL of the breed, a son of the WORLD'S RECORD SENIOR 4 YEAR OLD, KEYSTONE BEAUTY PLUM JOHANNA, with 25,787.5 lbs. of milk, 1294.7 lbs. of butter, strictly official in a year, 4% IN LONG TIME TEST. Daughters of cows with semi-official records from 600 lbs. of fat and up; sons of 30 lb. cows; son of a cow with 1050 lbs. in semi-official test. 100 or more animals from herds under Federal supervision. Some of the animals sold on a 60 day retest.

We have on hand a number of bulls and bull calves at private sale before October 1st. NATURALLY HORNLESS.—Geo. E. Stevenson, Clarks Summit, Pa.

SMITHSON HERD, REGISTERED HOLSTEINS

Two excellent young bulls by 32-lb. sires. Twenty Females, calves, heifers and bred cows. Must be sold before winter.

G. SMITH & SONS, Honesdale, Pa.

STEVENS HOLSTEIN FARM

of Cortland, N. Y., offers pure bred cows and calves, all ages; also extra high grade Holstein heifer calves $20 each, express paid in lots of 5; 2 heifer calves with purebred bull calf $75. Grade Holstein cows in carload lots. Wire me to meet you.
PAUL H. STEVENS, Prop.

We will give the use of a finely bred registered Holstein bull for 3 years to any responsible farmer. Write for our plan.
LIVESTOCK IMPROVEMENT CO., INC.,
CHARLTON, MASS.

WANTED A HOME

for choice registered and high grade Holstein-Friesian heifer and bull calves, $25 and up. Write us your wants. Browncroft Farms, Cortland Co. McGraw, N Y.

SUNNYBROOK GUERNSEYS
40 head, free of tuberculosis, bull calves for sale.
EDWIN B. MAULE, COATESVILLE, PA.

MILKING SHORTHORNS, sons of Glenside Royal Stamp, grandsons of General Clay; also a few females. C. M. KENNEDY & SONS, ULSTER, PA.

RUGGED PRODUCING AYRSHIRES

The herd has a strictly business atmosphere and they are bred for maximum production of milk and butterfat. [illegible] the look of a producer. They will appeal to you as the premier show type. Our present offering is one choice bull calf from the best blood in the herd and backed by excellent [illegible]. Also a couple young cows and heifers. Herd tuberculin tested, no reactors. CRESTMONT FARM, 31 N. FOURTH ST., SUNBURY, PA.

LIVE STOCK

FEEDING FALL PIGS

By W. H. Tomhave

The growing of fall pigs is becoming more comon in the eastern states as the number of brood sows kept on the farms increases. This is in a measure due to the increased cost of maintenance of brood sows and to the better methods of management. If the brood sow on the farm produces only one litter per year, the initial cost per pig is much higher than when two litters are produced. All the mature brood sows are capable of producing two litters per year without in any way impairing the health, thrift and vigor of either litter. It may require somewhat more feed to keep the brood sow in good breeding condition if two litters are produced, but the extra feed used will be well paid for. It may not be possible or desirable to breed all the brood sows for fall farrowing if a considerable number are kept. The reason for breeding only a part of the herd would be due to the greater difficulty in taking care of the large number of fall pigs.

Fall Pigs Do Well if Properly Cared For

Fall pigs should be farrowed the latter part of August or early in September. If farrowed at that time they will get a good start in life before cold weather sets in. If it is possible to secure it, a good field of rape or some other fall pasture crop should be provided for the brood sow and litter. The small pigs will not consume very much green forage while they are very small, but the brood sow will keep in good condition and the small pigs will get plenty of exercise. As soon as they develop they will consume some of the forage which will aid in developing their digestive system.

After the small pigs are a few days old and can take all the milk the brood sow produces, the sow should be fed a liberal grain ration in addition to the pasture. It should be well balanced with plenty of protein feed such as tankage, oil meal, or milk of some kind if the bulk of the grain is made up of corn.

The small pigs should be given access to grain as soon as they will take it. Provide them with a trough where the brood sows can not get at the feed and give them a small allowance of middlings and tankage when a few weeks old. As soon as the pigs eat well, let them have access to a self-feeder and use such feeds as corn meal, wheat middlings and tankage or some other desirable protein feed. The pigs should be given all the feed they will consume up to and following weaning time. They should be kept on the self-feeder with the same feeds up to the time they weigh around 100 pounds to 125 pounds. If any of the pigs are to be retained as breeders, they should be separated from the balance of the pigs and kept where they can be grown rather than fattened.

All the pigs that are to be marketed should be kept on a self-feeder containing corn and tankage, or some other protein feed. If ear corn is fed, the tankage or other protein feed may be kept in the self-feeder while the ear corn is fed on the ground or on a feeding floor. The pigs should have all the corn they will consume in order to get them ready for the spring market. They should also be provided with plenty of clean water and shelter to protect them from the cold. The feeding of winter pigs is more expensive than summer and fall feeding but as a rule, hogs sell for a higher price in the spring and early summer than late in the fall.

GRAIN FED TO LAMBS CAUSES RAPID GROWTH

Young animals make cheapest gains. It pays to keep lambs growing as rapidly as possible from the start. Give them a little grain as soon as they are old enough to eat it. They soon learn to like it, if it is provided where the old sheep cannot get it away from them. Creeps which will let the lambs thru to feed troughs and keep the ewes out serve this purpose. A good ration for the lambs can be made of three parts cracked corn two parts, ground oats and one part oil meal—preferably pea cake. They may be given all they will eat of it, but the troughs should be cleaned out daily to prevent souring of the feed with resultant digestive troubles in the lambs.

Lambs will soon show the effects of the grain. It not only keeps them in high condition but prepares them for market a little earlier than would be possible if they received no grain. A higher price is obtained on an early lamb market than on a late one. Besides this, the ewes have more time to pick up flesh and get in good breeding condition in the fall if the lambs are taken off early.

Lambs of fairly rapid growth are more resistant to disease than slow growing ones. There is less loss from parasites, such as stomach worm, and a healthier flock results if they are kept growing than when allowed only milk and pasture. A healthy flock is necessary to success in sheep raising, and if the work of parasites can be reduced by any method of feeding it is a double gain to the farmer. Most failures in sheep raising in the east are traced to parasites, and while feeding grain will not control the situation, it may go a long way towards creating a condition in the flock which makes for more profits, both by increased health and by increased prices for lambs.

THE HOG'S WINTER HOME

In providing shelter for the hog during the winter months the chief consideration is dryness. Other points, such as warmth and ventilation are important and closely related, but the absolute essential is dryness. Buildings heated by the warth of animals have a great tendency to excessive moisture because the warmth comes chiefly from the animals' breath, which is moisture laden. An excessively moist atmosphere is determental to the health of any animal, but to the pigs it is especially objectionable as they are more subject to rheumatism and other troubles tracable to dampness than many other animals.

Cement floors are the best from the standpoint of sanitation and durability, but a pig should never lie on a cement floor. Sleeping platforms should be provided. These may be raised only an inch or two above the cement or may be elevated so that there is a two story pen with a gangway up to the sleeping quarters.

Cement should not be used for piggery walls; it makes a damp building. Wooden walls, with plenty of insulation by means of paper and dead air spaces are best. A piggery should have ample sunlight, and the rays should shine on the sleeping quarters keeping the bedding dry and sweet. The ceiling of a piggery should not be too high; a low ceiling allows the buildings to warm up more readily and facilitates ventilation. A good system of ventilation should be installed such as the Rutherford system or a straw-filled loft with slatted ceiling may take the place of the foul air vents.

Where straw is plentiful, pigs may be wintered successfully in a large pile of straw. A burrow in the straw should be made for them by threshing the pile over a clump of bushes.

The ordinary A-shaped hog cabin is found very satisfactory in many northern sections, and is cheaply and quickly made. A cabin with straight walls and shingled roof is more durable but considerably more expensive. Two or more of these cabins may be placed in a row and the space between filled with straw. Straw should be piled against the sides of the end cabins. It is advisable to keep the pigs away from this straw or they will tramp it down and carry it into the cabins. An odd length of woven fencing is suitable for this purpose.

Brood sows wintered in such shelters winter better than in the most elaborately planned piggeries. They have to take exercise in coming out for food and their quarters are always dry. They will produce larger and stronger litters than are possible from sows in limited quarters no matters how comfortable the latter may seem to be.—Earl W. Gage, Chautauqua Co., N. Y.

SHEEP ARE HIGH CLASS WEED EXTERMINATORS

Did you ever stop to think of the value of a flock of sheep as a weed exterminating agency? A flock of sheep on the farm is worth as much in the destruction of weeds as a man with a team and cultivator or weeder thruout the growing season.

There is a big difference between cultivating weeds out or sheeping them off. Cultivating or mowing is expensive and you get nothing but a little humus added to the soil. Sheep on the other hand, turn your weeds into wool and mutton, while valuable manure is added to the fields as a fertilizer.

Not only do sheep add to the value of the farm by destroying weeds and improving fertility, but they produce two sources of revenue each year—wool in the spring and lambs in the fall.

Veterinary

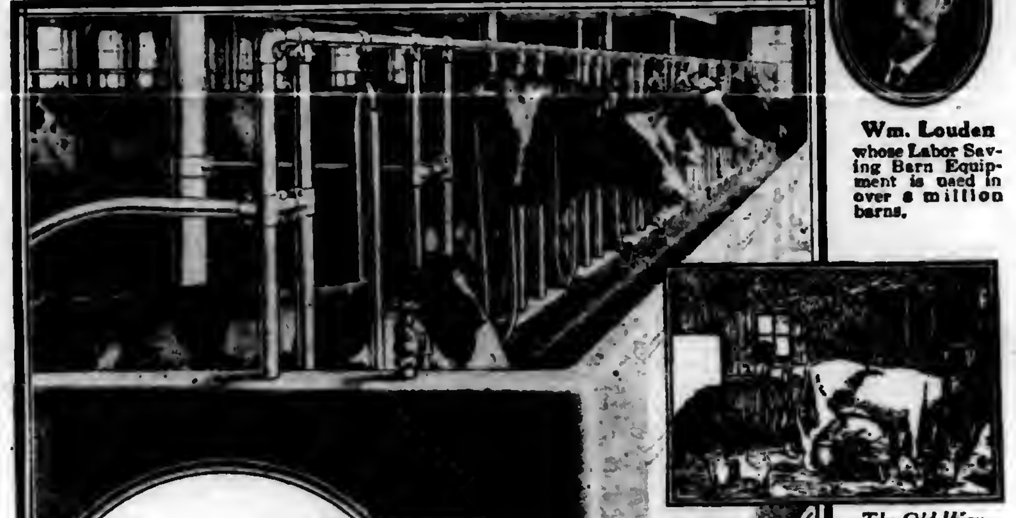
Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

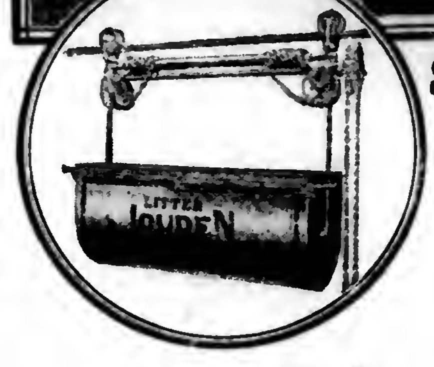
Mechanical Lameness.—I have an old horse, that would be of a lot of service to use yet, but she has an enlargement on her front knee cap, as large as half hen egg that causes her to go lame. Could you prescribe a remedy for her which will make her travel sound? T. C., Peach Bottom, Pa.—Her lameness is, of course, mechanical. Applying drugs will not reduce this kind of a bunch, cutting it out is impractical; however, you might try painting enlargement daily with tincture of iodine.

Sprained Ligaments, Sprained Tendons.—We have a ten-year-old work horse that is stiff and lame in left hind leg. About twelve months ago he went suddenly lame, his leg below hock swelled badly, I applied liniment, later on blistered leg. This treatment seemed to cure the lameness, but swelling remains. The tendons and ligament back of shin bone is hard, but not tender. I am told that treatment of the right kind will clean up his leg, but before going into it, prefer to hear from you. A. J. L., Darlington, Pa. A draft horse while hauling a very heavy load will occasionally sprain, not only the suspensory ligament, but both back tendons as well and I might say the hind leg is more likely to become the seat of injury than the fore leg. In light road horse the fore leg is most often sprained. All things considered the writer is inclined to believe it bad practice for you to now commence treatment with view of reducing swelling. In order that nature might properly repair the lacerated fibers of ligament and tendons, tissue had to be added, therefore the parts are now strong and should not be reduced and doubtless what stiffness there are is on account of thickened condition of the parts, causing a mechanical lameness. For slow farm work a chronic ailment of this kind should not interfere with him doing light work. Don't believe that treatment will reduce the ligament or tendons to their normal size.

Sprung Knees.—We have a four-year-old mare that has always had crooked forelegs. Both knees tilt forward, but she is not lame and never trembles. I have done nothing for her and she works every day. H. K. F., Gouverneur, N. Y. This is not a diseased condition of the tendons, but a deformity. It consists in such an alteration in the direction and articulation of the bones which form the various carpel joints that instead of forming a vertical line from the lower end of the forearm to the cannon bone they are so united that the knee is more or less bent forward, presenting a condition caused by the retraction of two of the principal muscles by which the cannon bone is flexed. This flexion of the knee may have been a congenial deformity and have continued from the foaling of the animal. Of course we find the same condition resulting from working colts too young. It may also be due to other diseases existing in parts of leg below the knee joint. After reading what I say, you will readily understand the folly of treatment.



The Old Way



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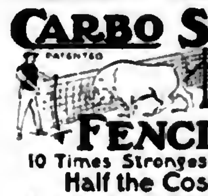

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Wednesday October 6, 1920 at 10 a. m
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The offering consists of a choice lot of cows, heifers and bulls. A chance for the buyer to get a wealth of breeding at his own price. Among the animals offered in this sale is a daughter of the Mighty Monarch, Daughters of Grand Champion Segis 2d, King Segis Pontiac Konigen, Niagara Maid Rag Apple and a number of other prominent sires. The cows are nearly all A. R. O. cows and the heifers from A. R. O. dams. Also a grandson of King of the Sadie Vales whose 25 nearest dams average 29.68 lbs. butter in 7 days. A splendid individual and should be in a good herd. A long distance record bull. Cows and heifers bred to 47-37 and 35 lb. bulls.

This is one of the choicest lot of Holsteins ever offered in Penna. Sale will be held under roof. Send for catalog.

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Famous Rawhide Roofing

No. LA5—Rawhide roofing in three weights—a high grade covering in rolls 108 sq. ft. with nails and cement. Heavy weight guaranteed twelve years, per roll **$2.85**; medium weight per roll **$2.65**; light weight per roll **$2.15**.

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Manufactured from Brand New Material of Selected Quality

Angle Steel Fence Posts

35c Each

No. LA3—46,000 of these pointed drive angle steel fence posts have come to us with a big purchase of material from the government. Brand new high grade finely made posts at a remarkable saving. 6 ft. long, made of 1 1/4 angle steel 1/8 in. thick; easily driven. Hold 7 wires on one side of angle and 6 wires on the other side in alternating positions to hold line wire on every style of fence.

Sale price each	35c
Lots of 100 each	33c
Lots of 500 or more each	30c

Government Barbed Wire

Greatest Offers Ever Made

A large quantity bought by us at less than the actual cost of manufacture. Fine barbed wire, made under rigid government supervision. 12 gauge open hearth steel wire with four point barbs 1/2 in. long, spaced 3 in. apart. Order quickly from special lots below.

4 point Painted Stock

No. LA6—This lot is coated with a special weather resisting paint. 88 lb. reels containing 750 ft.

625 reels or more per reel	$1.65
100 reels or more per reel	1.70
50 reels or more per reel	1.75
25 reels or more per reel	1.80
Less than 25 reels per reel	1.85

4 Point Galvanized Stock

No. LA7—This special lot contains quadruple galvanized coated barbed wire; galvanized after being made which means much to the life of the wire. 60 lb. reel contains 750 ft.

625 reels or more per reel	$3.55
100 reels or more per reel	3.60
50 reels or more per reel	3.65
25 reels or more per reel	3.70
Less than 25 reels per reel	3.75

Barbed Bottom Hog Fence

26 in. High Per Rod 32c

No. LA8—Special barbed bottom galvanized hog fencing made of No. 11 top wire and No. 14 intermediate line and stay wires. Stays spaced 8 in. apart. Space between line wires from bottom upwards are: 3, 3, 4, 4 1/2, 6 1/2 and 6 in. 100 rods weigh 425 lbs. 26 in. high per rod, **32c**. 32 in. high per rod, **39c**

By using two strands of barbed wire above this fence you can make a general purpose farm fence at very low cost.

Harris "Cream Getter" Separators

$55.50

Time to Pay If You Wish

No. LA12—These splendid machines have made a wonderful record in all sizes—all seasons of the year in all parts of the country. Newest model cream separators, easy to clean, easy to turn, easy to oil and now—easy to own.

Patented exclusive improvements everywhere—found only in these excellent separators.

Fully guaranteed to get all the cream—the best cream separator you can buy regardless of name, make or price. We'll take your old separator off your hands allowing liberally for it toward the purchase of your new cream getter.

Size No.	Cap'y lbs. per hr.	Sale Prices
* 1	* 175	* $34.[illegible]
* 2	* 250	* 38.[illegible]
3	375	55.50
5	500	59.95
7	750	68.00
9	950	75.00

* Indicates table sizes. All machines ready for shipments from Minn., Pa. and Chicago. 3% discount allowed if cash is sent with order.

No. LA13—Improved Cream Getter Junior Separator capacity 300 lbs. an hour on metal stand, each . . . **$33.50**

Bathroom Outfit $85.00

No. LA10—Splendid value is offered in this complete bathroom outfit. Consists of white porcelain enameled bath tub 5 ft. long, 30 in wide, fitted with nickel plated connected waste and over-flow and nickel plated double bath cock. White porcelain enameled lavatory, size 17x19 in. with nickel plated trap and faucetts. Closet outfit includes white vitreous earthenware wash down bowl with highly finished golden oak tank, copper lined, seat and cover matches tank. Here's your chance to buy an outfit worth upwards of $100.00 now for **$85.00**

Famous Watts Corn Shellers

$99.50

The world's best corn sheller now offered at big reduced prices. Most liberal terms and a 30-day free trial with a guarantee of positive satisfaction. Order now from this ad or get full particulars without delay.

Watts No. 1 — $34.50

No. LA14—For the man who shells corn for his own use. Capacity 50 to 75 bushels per hour with a 3 h.p. engine.

Watts No. 4 — $79.50

No. LA15—With cleaning system, cob stacker and grain elevator. Shell for yourself and a few neighbors.

Watts No. 7—$257.00

No. LA16—With standard equipment including wagon box, grain elevator, cob stacker, type "K" feeder on steel trucks; 200 bushels per hour.

Watts No. 8—$390.00

No. LA17—Double cylinder corn sheller for custom work, with standard equipment, wagon box elevator, swivel cob stacker and feeder, on steel horse hitch trucks; capacity 600 bu. per hour.

No. LA18—*Watts No. 4 Corn Sheller with cleaning system, cob stacker, grain elevator and automatic feeder as shown. Sale price now ..* **$99.50**

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$2.64 Per Gal.

No. LA19—Best formula. White, black and 26 non fading colors. Put up in 1 gal. cans, 5 gal. kits, 25 gal. half barrels and 50 gal. barrels. Per gal. $2.64

Guaranteed barn paint red, yellow or maroon, gal. . . $1.60
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Hog Troughs, $1.00

No. LA20—The trough you have hoped and waited for. Can't tip—flared legs. Ideal individual trough for hogs and sheep. Capacity 3 gal. Size 30 in. long and 7 in. wide. Built of heavy indestructible steel. Won't rust or cave in. Painted black. Lots of 12, each 90c. Lots of 6 each . . . .95. Sale price each . . . 1.00

Chemical Indoor Toilet

Brings to you every convenience of the modern toilet, sanitary and easily cleaned . . . **$9.95**

No. LA11—No plumbing needed with this improved chemical indoor toilet: fitted with regular closet seat and cover, finished in mahogany. Cast metal frame and base; steel casing in blue enamel. Complete with exhaust pipe and chemicals (about 6 months supply) **$9.95**

Iron Pipe Per Ft. 8c

No. LA21—Our big complete stock of pipe offers wonderful values. Pipe in random lengths complete with couplings; all sizes now offered at unusual money savings. Suitable for the conveyance of water and all liquids. Order now. 1 in. pipe per ft. **8c**

All other sizes priced proportionally low

New Mixed Nails

Per 100 lbs. $4.95

No. LA22—New wire nails including all sizes from 3 to 40d. Put up in 100 lb. kegs. A handy assortment for general use—indispensable on the farm. Plenty of all sizes. Sale price per 100 lbs. . . **$4.95**

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No. LA23—A splendid engine with Webster oscillating magneto. Develops full rated horse power. A sure starter and steady worker under all conditions.

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1 3/4 H. P.	$49.50	3 H. P.	$ 96.00
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$175.00

Mounted on Trucks

10 to 18 H. P. Engine Runs it.

No. LA24—This low price offer is your opportunity to save money on a high grade ensilage cutter. A 15 in. machine, capacity 15 to 20 tons per hour. Furnished with blower pipe for 30 ft. silo, mounted on horse hitch steel trucks. Buy the complete outfit during this sale for **$175.00**

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Latest pattern honeycomb radiator for Ford automobiles. Large water capacity and cooling surface, flexible core allows for expansion — prevents bursting. All parts coming in contact with water made of brass. Wrought steel casing, black Japaned finish. Weight 40 lbs.

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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880
PUBLISHED WEEKLY

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Vol. 48—No. 15 PHILADELPHIA, PA., SATURDAY, OCTOBER 9, 1920 75 Cents per Year

A Farm That is Run by a Business System

Dairying and Poultry Form a Good Combination---By L. G. Gillam, New Jersey

Among the hills of Northern New Jersey are located many well-kept and successful dairy and general farms, which are from one hundred to two hundred acres in size with several acres in permanent pasture and on which much pure-bred stock is kept with a sideline of poultry or fruit. The Broadview Farm, owned and operated by J. Percy Van Zandt and his brother, is located at Skillman in the southern part of Somerset County and is considered one of the prosperous farms of this progressive dairy section. This farm consists of 180 acres and has been in the Van Zandt family for many years, until recently being operated by Mr. E. L. Van Zandt, father of the boy now actively engaged in raising pure-bred cattle and poultry. The farm is situated on a plateau and commands an excellent view of the fine farming districts of Somerset, Mercer and Hunterdon counties. The large, comfortable farm house, spacious barns and other buildings are surrounded by extensive fertile fields sloping gently to the South and North.

Farm Building, Herd and Pasture on a Central New Jersey Farm

Mr. Van Zandt, with his brother's assistance, intends to go in for pure-bred Holsteins and Guernseys besides conducting an extensive poultry business. The past season they operated the 180 acres in the home place but this winter the next farm, comprising 90 acres, has been added and the coming season the entire acreage of 270 acres will be farmed. Mr. Van Zandt believes the poultry business offers unusual opportunities if properly managed and having considerable experience in this line, the two brothers intend to expand this season, increasing their flock from 675 to 3,000 birds.

A Well-Planned Dairy

The type of dairy barns on the Broadview Farm is perhaps the best to be found in this part of the state, with the interior arrangement, similar to dairy buildings found thruout the Middle West, are so built that the dairy herd may be handled quickly, with the least possible labor, and to the best advantage. In fact everything on the Van Zandt farm points to the saving of labor. The dairy barn was built after a careful study of the best types of buildings and includes an enclosed shed with hay supplied from the mow overhead, and fed in a large rack placed in the center of the enclosure. The straw is also dropped thru from the overhead mow or open floor and is supplied in such a manner that it is distributed evenly over the entire bottom of the enclosure. This bottom consists of the bare ground from which the topsoil was originally removed to a depth of several inches.

Herd Healthier and Manure Better Conserved

The cows are in the stanchions in an adjoining stable only at milking time, when they are fed their grain and silage and then returned to the shed. By this method the herd not only gets sufficient exercise when not being pastured but the cows are kept clean, are healthier because of the abundance of fresh air and light, and, lastly, the manure supply is conserved in the best possible way. By the continual even distribution of straw from above and the tramping down of the manure by the cattle, layer after layer of manure is formed with a very small percentage of waste. Mr. Van Zandt estimates that his manure supply is increased almost 50 % by this method of conservation. When it is desired to remove the manure, the spreader is driven in thru a door on one side of the shed and out thru a door on the opposite side. The enclosed shed is approximately 50 x 60 feet in size and contains a tank with running water for the cows.

About 28 head are now being kept, most of which are of the Guernsey breed. Altho most of the herd at the present time is grade stock, Mr. Van Zandt is gradually developing a pure-bred herd. The production of the herd is being studied thru a cow testing association and boarders are not being kept. A milking machine is used with great satisfaction and considerable saving of labor.

An Extensive Poultry Plant

Mr. Van Zandt has made a careful study of the poultry business and in runnin his plant according to the lessons learned thru practical experience, together with advice offered by the State Agricultural College. He has a flock of 675 White Leghorns and is getting in September from 375 to 400 eggs daily. The poultry houses are arranged to care for the birds in large units and recently electric lighting has been used to increase egg production. The artificial lights are turned on about 4 A. M. and Mr. Van Zandt does not hesitate to say that this method is increasing production and at the same time making the flock healthier.

It is the intention of the owners of Broadview Farm to increase extensively the size of their plant this year. They are planning a flock of 3,000 birds and are building ten new brooder houses.

Successful at Vineland Contest

The production of the flock is also being increased and the strain improved by the selection of males and the culling of females. The results at Vineland show the excellence of Mr. Van Zandt's judgment, where, during the first year of the Vineland International Egg Laying Contest, his pen of ten birds, competing against birds from all sections, won the first prize in the contest. The record of this prize winning pen was a total of 2,212 eggs for the year with every hen except two producing over 200 eggs, the highest having 264 eggs to her credit. During the third year of the contest Mr. Van Zandt had a pullet, from the hens of the original pen, which gave 288 eggs, being tied with two others for the highest individual production that year. For the total of the three years the Broadview Farms Pen stood second, which, together with the individual records, promises a bright future for Van Zandt's flock as his strain is now definitely established.

A Four Year Rotation Practiced

On the 145 acres now under cultivation a four year rotation of corn, small grains, clover and timothy is practiced with a part of the farm devoted to alfalfa. The corn, oats, wheat and clover go to the cows and poultry, while the rye and timothy hay go to market as cash crops. Fertility is maintained by the use of legumes, supplemented by stable manure and some commercial fertilizers. Ground limestone is applied to some part of the farm every year at the rate of about 2000 pounds to the acre. During the past season 65 acres were planted to grain, 30 acres to corn and fifty acres to hay, with about thirty acres in pasture.

(Continued on Page 4.)

HASSLER SHOCK ABSORBER PATENTED
CONICAL SPRING AT THIS ANGLE PREVENTS SIDESWAY
STOP ON LEVER PREVENTS UP-THROW
SOFT AND RESILIENT ACTION DOWNWARD
TRADE MARK

It's Speed that Destroys—

SPEED changes the gentle wind into a destructive tornado.

If you would drive your Ford Car slowly enough it would need no springs at all. But speed requires something to protect against the bumps and jars. Every mile added to the speed increases the injury to the car. Innocent little ruts in the road have the destructive power of a tornado when your car is raced over them.

But you can protect your car against these bumps and vibrations; you can add that necessary protection not provided by any ordinary springs; you simply equip your car with Hassler Shock Absorbers.

The results of using Hassler Shock Absorbers are truly remarkable. They actually decrease the repair and tire expense one-third. They add one-third to the life of the car.

Think of these great advantages in addition to the greater comfort, which you usually consider to be the sole object of equipping a car with shock absorbers.

Little wonder there are a million Ford owners in the United States today who are enthusiastic users of Hassler Shock Absorbers!

There is a type of Hassler Shock Absorber for every Ford model; for the touring car, the roadster, the coupe, the sedan, and the one-ton truck. The dealer will see that your car is fitted with the right Hasslers. If you don't know the Hassler dealer, write us.

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Shock Absorbers
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The conical springs set at the angle shown prevent sidesway and allow for the most resilient downward action. The springs compress on either upward or downward movements—do not stretch out of shape—do not allow up-throw. Hasslers last as long as the Ford and make it last.

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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880 PUBLISHED WEEKLY

The Lawrence
Publishing Company
Philadelphia

Number 48 PHILADELPHIA, PA., SATURDAY, OCTOBER 9, 1920 Number 15

Soil Fertility Developments

Has one of the Great Dreams of Soil Fertility Come True?

Dr. Jacob G. Lipman
N. J. Experiment Station

In 1862 the English investigators, John B. Lawes and Joseph H. Gilbert, assisted by the American Evan Pugh, published what is now regarded as a classical paper. The title of this paper was "On the Sources of the Nitrogen of Vegetation; With Special Reference to the Question Whether Plants Assimilate Free or Uncombined Nitrogen." The experiments reported in this paper were begun in the hope that they might help unveil one of the great mysteries of soil fertility.

It was well known to practical farmers that certain crops seem to have the power to increase the fertility of the land. This knowledge, already in the possession of the Romans, became a tradition among the farmers of Europe and America. Clovers, vetches and other legumes were held in high esteem because of their ability to enrich the soil. By the middle of the 19 century it had been established by the French investigator Boussingault that lands on which he had grown clovers and other legumes had actually increased their nitrogen content, even tho other crops in the rotation had removed considerable quantites of it.

In the face of the opinion that had come to prevail among farmers that clovers and other legumes are soil-enriching crops, the classical experiments of Lawes, Gilbert and Pugh proved that clovers, like wheat or other non-legumes, could not accomplish what was accredited to them. It was not until 1886 when the German Hellriegel demonstrated that clovers and other legumes did assimilate the free nitrogen of the air and did, under suitable conditions, increase the nitrogen of the soil. They also explained why Lawes, Gilbert and Pugh, as well as other investigators, had obtained negative results. They had not realized that the fixation of atmospheric nitrogen can be accomplished by clovers and other legumes only when they are associated with certain bacteria that live in their root nodules. By using sterilized soil the English investigators, naturally, did not give the legumes experimented with an opportunity to become associated with the necessary bacteria.

Since the first paper written by Hellriegel in 1886 many investigators had added to our knowledge of nitrogen-fixation both by crops associated with bacteria or by bacteria living directly in the soil itself. It has been shown that, apart from the plants belonging to the family of legumes there are a few others that also have the ability to assimilate the free nitrogen of the air. It has also been shown how the missing bacteria may be supplied by inoculation, and the knowledge which has thus come to us has been used far and wide in promoting crop production and increasing the fertility of the land. An almost endless number of crop rotations in which Legumes are included have been suggested for different types of farming. In the United States cow peas, soy beans, velvet beans, sweet clover, vetches, alfalfa and other legumes have earned deserved fame as soil improvers or as crops able to grow on land poorly provided with nitrogen.

When the secret of nitrogen accumulation by legumes had been revealed to students and investigators, they naturally asked whether it would not be possible to endow all crops with the ability to assimilate air nitrogen. If this were possible, profitable crops could be grown on the poorest land by supplying them merely with available phosphates, potash and lime. Soil humus could be maintained at a relatively low cost, and the farmer would become independent of nitrate of soda, sulfate of ammonia, the air nitrates—made by electrochemical processes, packing house by-products—like tankage, dried blood, horn and hoof meal, etc., dried and ground fish, cottonseed meal, garbage tankage, etc. Obviously, enormous sums of money could be saved, the cost of producing food reduced and the area of cultivated land enormously extended if some genius were to teach us how potatoes, corn, wheat or oats could be made, like alfalfa or clover, independent of any soil or fertilizer supply of nitrogen.

Among the investigators to attempt an experimental solution of this problem was the American, A. Schneider, who carried on his experiments at the University of Illinois in the early nineties. Also the pioneer botanist and plant pathologist, Dr. T. J. Burrill, of the University of Illinois, busied himself with the question toward the end of his years. His efforts, like those of Schneider, were, however, fruitless.

Some weeks ago there appeared in one of the German journals a preliminary paper by Gustav Blunk. The author of this paper claims that he has solved the problem of endowing all crops with the ability to assimilate the free nitrogen of the air. Like Schneider and Burrill, he grew the nodule bacteria or artificial media to which he had added extracts of the roots of plants to which the bacteria were to be accustomed. Gradually the proportion of such root extracts was increased. Finally the bacteria were accustomed to grow on dead and then on the living roots of the plants which they were to inoculate. Details of this discovery was promised by the author and will be awaited with much interest. If he has really acocmplished what he claims to have accomplished, he will have rendered a great service to humanity and will have inscribed his name on the roll of the immortals.

HOW HOLDEN, MASSACHUSETTS, ORGANIZED FOR CIVIC AND SOCIAL IMPROVEMENT

By EARLE W. GAGE

Holden Community House

The story of how Holden, a small and very old New England community, came back, is interesting, and shows the way to other rural sections facing the same problems. This Massachusetts rural community, together with the organization of its community house, is an example of the revival of civic pride, public spirit and true neighborliness in a small community, having the many problems of like places.

Like other small country towns, Holden had enough organizations, if not too many, but each was promoting its own aims in a selfish manner, and none were overly successful. Therefore, these were merged into one institution, yet each holding many of its former service plans, but taking active part in the movement toward expansion along social lines, to give the community a common center—a club house.

An old colonial house of three stories was standing on a piece of land formerly owned by John Hancock, and this was to be converted from a tavern of ill repute into a cheaper boarding house. As this was located in the center of the town, adjacent to the library, town hall and principal church, the leaders at once started a movement to secure it for a community hall.

So a group of local leaders, including representatives of the two church clubs, improvement society, D. A. R., and two other clubs, met and formed a temporary organization known as the Holden Community House Association. This was later incorporated under the laws of the state.

The specific aim of the people who sponsored this building was to provide a house which, without particular consideration for class, party, or creed, would serve community needs and provide an assembly place for the various social organizations of the community. In all, 22 local organizations wished to use the building. Also, a place where the people might gather for recreation thru games, banquets, and other forms of social relaxation. The building, reconstructed, represents an outlay of more than $5,000.

The house is of brick, three stories high, and of colonial type of architecture. It is painted a colonial buff on the outside, with white trimmings. Care was taken to retain the fireplaces in

(Continued on Page 5).

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HEATING THE FARM HOME

Heating the farm home in the country is different from heating the city home. Before heating the house the construction of the dwelling must be gone into and all possible means of draft ingress stopped.

It will be found that the prevailing cold winds are from the west and the north or the northwest, once in awhile from the northeast. The foundation walls must be given a careful survey and all loose stones must be morticed into proper places. Cracks should be filled and windows properly covered to keep out air. It it wise to bank the foundation after this operation with dirt as far up as possible and this will give additional warmth. Where there is no cellar under the house all air spaces should be tightly sealed and dirt thrown up as far as possible. Many country houses will be found to have cold floors due to air spaces in the foundation or holes made by animals burrowing under the foundation.

Harvesting Potatoes on a Central New Jersey Farm

The next consideration is the walls particularly those on the west and north sides of the house. If walls are draughty and the sides are clapboards or siding they should be carefully removed and boards placed underneath covered with buildng paper or tar paper. If these boards are sunk beneath the framing window frames will not have to be removed. Window frames and paper should be joined tightly together as plenty of air comes in thru these crevices.

Stripping placed on the outside of the windows at tops, sides and bottom and a strip on the inside between the sash but only tacked to one so as to allow raising and lowering the sash.

Many country homes have shingle roofs that allow an abundance of air to come thru.* Rubberoid tacked over the shingles and brought to overlap all under portions and attached to the frame boards will stop this trouble. Chimneys should be repaired and brought two or three feet above the highest eave of the house.

Protective trees planted on the west and north sides of the house will give comfort in the future. Several coats of paint will help to stop small leaks and add to the beauty of the dwelling and also add to its years of service.

Weather doors on the back and the front of the house will prevent drafts that are sudden and which often induce a fit of sneezing. Ells, separate rooms and attached outkitchens and woodsheds should be inspected and see if they add to the discomfort of the house in the cold weather.

But how about ventilation? Will not all these methods make the house so that all fresh air will be excluded? Yes. This is the result desired. When all drafts are stopped the heating and ventilation of the house will be an easy matter.

The question next arising in our minds is what system of heat will we use for heating the house. In some sections of the country coal will be hard to obtain. Wood will have to be used. For these houses the pipeless or one pipe heaters are giving excellent service. Where coal can be obtained the hot water system will certainly give the most uniform heat that can be obtained. The room if ordinary precautions be taken will seldom become overheated or unless too much ventilation be given become too chilly. I have been in houses with hot water heat where the pipes were frozen every extra cold snap on the second and third floor due to the walls of the house being draughty.

Where it is desired to keep white potatoes or other stored vegetables some concerns are placing on the market heaters that will allow these to be kept in the same cellar.

It is well to look over the work of the men installing the heating system to see that heated pipes do not come too close to the woodwork. Asbestos covered pipes are the best fire insurance in this respect.

In some country homes where lighting systems have been installed, heating by electricity has also been added. One home in question that I was in recently was the best heated and ventilated house I ever entered in the country. Ventilation was secured by a separate set of pipes which allowed fresh air to enter and foul air to be removed. A gentle circulation of fresh air was secured by the slow movement of a fan thru the main ventilator pipe.—James E. Toomey, New Jersey.

A FARM THAT IS RUN BY A BUSINESS SYSTEM

(Continued from Page 1).

Tractors Save Horses and Labor

All the work on this farm is being done by the two brothers with two tractors. They are now keeping but two horses which are only used for planting and bringing in the hay. The tractors are used for practically every other farm operation and have proven very satisfactory. In fact the owners of Broadview Farm could not get along without them as they have meant a great saving in labor and cost of production. The usefulness of a tractor on this farm was plainly demonstrated last season when 65 acres of rye and wheat were cut with one tractor in three days.

Mr. Van Zandt has been a close student of agriculture and has planned his farm operation in a careful manner so as to produce crops, and raise cattle and poultry at the least expense. As an example of a large acreage being profitably handled with the least outlay for labor, this farm is outstanding.

THE SMALL FARMER

It is about time that the small farmer gets some consideration. It is said that he represents the steadying power in the republic. He is often called the balance wheel because of his conservative, independent thought. If this be true, we must be careful that we do not take too much weight off this balance wheel or its steadying power will become of little value. It was only a short time ago that it seemed as if too much weight had been taken off already and that the wheels of radicalism would sweep the country; but now we have slowed up a bit and to play safe we had better put more weight on the balance wheel, else next time we get the speed up we shall be swept off our feet.

If we are going to have small, one-man farms, together with better standards of living prices of farm produce will have to be of such a net value to the farmer that one man's labor directed in the line of production will produce a sufficient income to maintain himself and family, in proper standard of living, without making slaves of themselves. Small, one-man farms mean one of two things: Cheap food and peasantry for those who produce it, or a price for food equal to the cost of production, plus a profit sufficient to maintain an attractive standard of living. One-man farms mean more labor saving machinery. Success in farming consists in doing the right thing at the right time. There is only a certain amount of time to do a certain amount of work. There is a time to sow and a time to reap, and the amount of work that one man can do in that time must bring him sufficient income to maintain his business and his family. The more labor-saving machinery that he has, the more work he can do.—V. Ross Nicodemus, Bedford County, Pa.

HOW HOLDEN, MASS., ORGANIZED FOR CIVIC AND SOCIAL IMPROVEMENT

(Continued from Page 3.)

all the rooms. Other colonial features include a Dutch oven, old window casings, wide veranda, and cupola on top.

As a result of having an adequate meeting place, the Town Club a men's organization with 65 members, was formed, with social, recreational, and civic aims. Likewise the two women's literary clubs united and formed one organization of 85 charter members which meets in the community house. A community orchestra has also been organized and meets for practice in the building. Other organizations which meet there are the D. A. R., Boy Scouts, Red Cross and Equal Franchise League.

The local high school did not have proper facilities, and no class in cooking was had. Such a course is now available, the school board renting the kitchen in the community house for this class.

There is a large assembly room on the first and second floor, the kitchen, with accommodations for serving about 200 people being located on the second floor, connected with the first by dum waiters. Music rooms, library, historical collections, and rest rooms adjoin these, with accommodations for from 25 to 50 people each.

Every community may accomplish as much as Holden if the various organizations will combine their efforts in one worthy community project.

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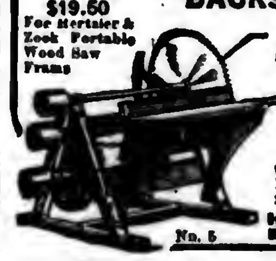

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VOLUME 48 NUMBER 15

Our Job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Save as Well as Produce

TENS OF THOUSANDS, probably millions of bushels of Eastern apples will rot before next spring, either under the trees or in inadequate storage. This should be an added argument for the establishment of co-operative farm storage of produce. As we see it the proper storage of farm produce at the sources of production is the most important economic problem now before farmers. In no other way does it seem possible to avoid the disaster of "gluts" and low prices. No other business leaves the care and storage of its products to other agencies, nor over-crowds the markets so as to force down prices below cost of production. The business cooperation of farmers and the erection of storage plants and warehouses suited to their products preferably near railroads—is a work that should be taken up by granges and other organizations this winter so as to be ready for next year's crops. It is time this was done and there is no excuse for further delay in preparations to stop the annual loss of food stuffs and consequent profits to farmers. The need is great and the time is ripe. What's the use of slaving to produce if the products must go to waste or be sold at a loss after they are produced. Even bees are wise enough to build their cells first.

The Corn and Cattle Prices

THE MARKET CONDITIONS affecting corn and cattle last season, and the present outlook in these important products present a subject in economics on which it would be well for farmers to do some straight thinking. Many farmers are inclined to consider a single season, or a single product in their calculations of loss and gain, not realizing that each season and each operation is affected by other years and by other lines of farming. For instance, last year most cattle feeders found after selling their fat cattle that they lost money—as they figured it. They were discouraged over the outcome and decided to feed no more at present. The same was true of the breeders of feeders. All figured upon the basis of $2 corn, or thereabouts, and the results showed a loss. But what made the $2 price for corn? Chiefly the fact that there were a great many cattle to feed. If there had been only a fraction of the number of feeders raised and fed last year, corn might have sold at $1, and at this price every feeder would have made a good profit. It may safely be assumed that the feeders who fed their own corn fared better by putting it into their cattle than they would if they and others had sold their corn instead.

This class of in-and-out feeders will no doubt have an object lesson in the economics of this question the coming season. Reports from cattle breeding states indicate that they are short 20 to 40 percent of the usual number of market feeders and that it will be simply impossible to supply the usual number. With a record-breaking corn crop in sight and a poor export market outlook for corn, it is most regretable that the supply of feeders is short, because the result will be dear beef and cheap corn. The habit of swinging in and out in production, often due to faulty methods of calculation, goes far to upset the equilibrium of the markets. This in turn causes loss where gain might have been realized.

Decreasing Representation

ONE of the important results of the shift of population from the farm to the cities is the corresponding increase in legislative representation from cities with little or none from country districts. We may use the present census figures for Pennsylvania as an illustration. The indications are that the 1920 census will show about 8,500,000 inhabitants in the state. Based upon the present law of one representative to each 211,000 people this will give Pennsylvania five additional representatives in Congress, and because of the large increase in the population of cities these new representatives will all be from Philadelphia and Pittsburgh—three from the former and two from the latter city.

While the country population has decreased in numbers it has not decreased in importance or in the amount of wealth invested and produced annually. Since representative government is based upon people and not upon property or class there is no way to avoid this tendency, but the effect cannot be considered as encouraging to agriculture. However honest may be the intentions of a city-minded man he cannot have the knowledge, sympathy, or understanding of agriculture and hence cannot legislate intelligently for that industry.

It is probable that other states will find their situation similar to that in Pennsylvania. If so, farmers will find it more necessary than ever before to disregard partisan matters in selecting their representatives in Congress and Legislatures, and vote for men who they know will represent them and their business.

The Merchant Marine

THE THINKING FARMER no longer considers any national question as outside his business. He realizes that every question of national policy has a more or less direct bearing upon agriculture. He is affected to a greater or less extent by crop conditions in Argentina and Australia. The exchange rates of other nations of the world, the labor conditions of Italy and Hungary, the economic status of Russia—all these questions are of importance to the American farmer today to a greater extent than they were to his grandfather, or even before the Great War.

Before the war this was a debtor nation. We had practically no credits abroad. We had few foreign investments. We were much in the situation of a farmer who had mortgaged his farm to the limit. Now the situation is reversed. We hold the mortgage. It is at this point we need to proceed cautiously and wisely. The holder of a mortgage is always interested in the business activities of the mortgagees so that he may get his money back. The question that most concerns the people of this nation is, what opportunity and what duty have we to perform that will insure getting our money back, maintain production, and at the same time help to stabilize the business of the world? Part of the answer lies in the proper development of our merchant marine.

There is little question but what the war torn nations of Europe will soon be able to produce normally in most lines. We are interested that they shall so that they may be able to pay back our billions and so that we may trade profitably with them. But the fear is that in their poverty and impatience to get trade they may work so cheaply and sell so low as to make it impossible for us to compete in the world's markets and maintain our standard of living. If this fear is well grounded, how shall the problem be met? It is generally conceded that the question cannot be wholly solved by enacting a high-tariff law since this would also interfere in the development of our ocean trade if the rates were too high. The National Marine League is pushing a propaganda, the gist of which is about as follows:

We must develop and maintain an efficient merchant marine of American ships, owned in America and manned by American seamen. By this means we can establish our industrial independence and be able to secure the best prices for American goods. We must cease to be a producer only, and become a distributor, or rather hold on to the distributing business we gained during the war. We must have free ports in America for redistribution of goods, and we must have American agents in foreign ports who will not only get orders for American goods, but will secure return cargo for American ships.

Such, in brief, is the plan for the proponents of a large merchant marine. Without commenting upon the plan, there are a few questions which the American people should think out clearly before deciding for or against a policy. First: Will it necessitate the purchase of the cheap products of other countries for distribution and the raising of their prices to prevent flooding the markets with cheaper goods than we can produce? If so, would the policy be inconsistent with our national efforts to prevent combinations in restraint of trade? Second; would there likely be an impartial development of trade in all our products, including agriculture? Or, would there be a tendency to push the export sales of manufactured goods and make up the return cargoes of food products purchased in other countries?

These are some of the questions to be settled and they must be settled right. It is the farmer's privilege and duty to take a hand in shaping the policies of our foreign trade—something this nation has not conducted in its own ships for about a century. We believe farmers are interested in pushing this trade and in the maintenance of our infant merchant marine, but we must see that it is not done to the profit of one class and at the expense of another.

Our Washington Letter

A new division of Publicity has been organized in the Federal Department of Agriculture, by the consolidation of the bureaus of Publications and Informations. Edw. B. Reid, formerly chief of the Bureau of Publications, is in charge, and Harlan Smith, formerly of the Bureau of Information, heads the Publications bureau.

* * *

The National Grange at its coming session will be asked to endorse the proposal that this government grant a loan or credit of one billion dollars to Germany, the money to be spent in this country for food and raw material. It is claimed that unless such action is taken the United States will lose an outlet for vast quantities of farm products which will react disastrously on American agriculture. A continuation of the present small volume of export trade for American produce means there will not be any foreign markets left for our farmers' surplus products. Beacuse of a lack of a foreign market our corn crop, estimated at 3,000,000,000 bushels for 1920, our wheat, barley, and other cereal crops are greatly reduced in value. Germany, it is asserted, proposes to purchase in the first year an estimated amount of $750,000,000 worth of food and raw materials in the United States, providing this credit is granted, and the credit is to be based on the billion dollars or more of alien property now held by this country.

* * *

Judging from the sentiments of farmers, as reflected in the various conferences and meetings in Washington, the farmers of the country are much concerned as to whether they are going to be represented in the cabinet of the next president by a real producing farmer or by a farmer leader who is not a farmer. It has come to a pretty pass, they say, if there are no real farmers left who are capable of holding a seat in the cabinet. If the next president desires to please the farmers he will make a long search if necessary for a capable farmer for his secretary of agriculture.

* * *

Farmers of the West thru the American Farm Bureau Federation have protested against the policy of the Federal Reserve Board which has resulted in unduly restricting credits. Cattle producers stated that their loans had been called at a time when it meant heavy losses to them. A large Chicago bank reported to the Federal Reserve Board that it had found it necessary to call large numbers of cattle loans, and because of this cattle that had not been properly finished for the market had to be sacrificed to meet these notes that could not be renewed on account of the attitude of the Federal Treasury.

HARRISBURG LETTER

Survey and Certification. — Arrangements for important cooperative work between the State Department of Agriculture and State College, together with the farm bureaus have been completed by Secretary Fred Rasmussen and bid fair to bring about results as valuable as the apple survey whose reports are just commencing to be made. Early in November, State and College experts will begin a vegetable or market garden survey and ascertain for the first time what Pennsylvania raises and why the markets are jammed at one time and poor at another. It is the idea to commence in the sparsely settled counties and work forward, getting to the cities by mid-winter when the market conditions can be observed at adverse periods. The scheme will be to learn what produce is raised, what quantity, where specialized in and how marketed. The latter details will be given close attention and the aid of the State Bureau of Markets will be extended where possible. The other project is for certification of seeds. This is to be worked out thru the new botanical division in the Bureau of Plant Industry and in time will be extended to many lines. There will be tests made and such seeds as get thru the Laboratory Bureau and comply with State requirements will be certified.

The Potato Situation.—Potatoes planted as experiments in a number of counties to see how they would survive weather, soil, pest and other conditions are now being dug and very fair preliminary reports have been received. The information is to be carefully studied and it is hoped by next spring to have considerable stock of immune seed potatoes and first hand information regarding the manner in which the potatoes have thrived in various counties. Plans for certification of seed potatoes in collaboration with State College are well in hand and the first will go out before long. Incidentally, there is a big potato crop being gathered in Pennsylvania and the price is away down. In some sections, it may be added the tomato crop is too big to handle and as for corn the reports are indicative of a heavy yield.

A New Pest on the Horizon.—With the state having to meet a federal restriction because of the Japanese beetle near Philadelphia, and the gypsy moth being hunted several places, state entomological authorities are seeking some way to prevent the bean ladybug beetle from getting a foothold here. This bug is about one of the most destructive of bean pests and has been found in several southern states. In view of the attention being devoted to bean raising in Pennsylvania every effort to prevent the bug from getting in will be made.

Tracing the Weeds.—State botanical authorities are looking up some new weeds which have been found along railroads in this state and believe that they are from far away and have been planted here thru accidents of travel, either by cattle or by being blown upon cars. Some of the weeds are very destructive and have been ordered attacked. It may be added that complaints of dodder, chicory, wild mustard and thistles have come to the Capitol this year and when the fair season ends it is hoped that the exhibits of weeds will have carried home their lesson. From letters received it looks as tho a new weed law would meet much support. —Hamilton, Harrisburg, October 4.

NEW YORK LETTER

Rural Index.—More than 600 farmers are listed by name and address in the Groton Rural Index, the second town in Tompkins County to be thus indexed. The clock system of rural addresses has been used, being improved in this its second application here. The system is being introduced in Madison County now. The country has long needed some practical system of locating farm homes, as well as of rating farmers financially, as city men are rated.

City Helped at Expense of Farms. —The legislature has been in extra session to consider the housing problem. Instead of looking into lumber prices and making it an inducement to own or build houses for rent some of the methods proposed are: "Exemption from all tax of first mortgages not exceeding assessed values of land and buildings up to $50,000; State money loaned to builders at low rate of interest; a certain proportion of all funds in savings banks and insurance companies for building purposes. The plans are good for the cities at the expense of rural tax payers with 27,000 empty farm houses in the state already. Persons who want to buy a farm or to improve the buildings on a farm are not given these helps but are rather taxed to help city builders.

City to Sell Apples.—The State Council of Farms and Markets in arranging to have New York city sell state grown grade A apples in 1500 retail stores, at 5 cents a pound. This is an effort to help save the enormous apple crop, of 5,000,0000 barrels in this state from waste. The Commissioner of Markets asks growers to communicate with him telling of available stores of apples.

Growing Demand for Grape Juice. —Grape growers are finding along with others, that prohibition was no meanace to them. Instead of the $75 a ton for grapes of former days they are getting $125 a ton, with a growing demand for more of the fruit for juices to be used in soft drinks.

Big Elevator Purchase.—The new Grange League Federation Exchange has purchased the Fleischman elevator and two acres of land in Buffalo, at $350,000. The milling machinery is in working condition and efficient mixing machinery will be installed, so as to put out 30 carloads of mixed feeds per day. Another big plant and 2¼ acres of land were recently acquired in Syracuse to develop the feed business, selling direct to farmers. A large stock of other farm necessities will be handled also. Grains will be brought in the west of independent elevators, saving middlemens' profits.—F.

NEW JERSEY NEWS

Fair a Success.—The 1920 exhibition of the Trenton Inter-State Fair Association here during the week was a great success from an agricultural standpoint. The exhibits were more numerous and attracted more attention than heretofore. Thousands of farmers devoted most of Wednesday Farmers' Day to the exhibition buildings, where vegetables, fruits, cattle and other things dear to their hearts were on display. They also spent much time in the outdoors near the buildings, where splendid exhibits of all kinds of farm machinery could be seen. The attendance of farmers on that day was estimated to be far superior in numbers than at previous fairs. The New Jersey State Village for Epileptics carried off first honors among the twelve state institutions displaying their farm products. The State Home for Girls at Trenton came second, and the State Home for Boys at Jamesburg third. Dr. David F. Weeks, superintendent of the Skillman institution, was presented with a silver cup by the fair management. This was the first time in the history of New Jersey, that a display of the products of the institutional farms were on public view.

You've heard about a community survey; how about a household survey? If you look the rooms over with a critical eye maybe you'll find that the furnishings aren't being utilized to best advantage.

Statement of Ownership and Management of the Pennsylvania Farmer, Published Weekly at Philadelphia, Pa., Required by the Act of August 24th, 1912.

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Business Manager, Neff Laing,	Phila., Pa.
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(Signed) NEFF LAING,
Manager.

Sworn to and subscribed before me this 29th day of September, 1920.
S. F. FRIES, Notary Public.
(My commission expires May 1, 1922.)

26 Below Zero, Yet WholeHouseisWarm

Residence of Mr. C. L. Cory, Mannsville, N. Y.

"I am more than pleased with the Stewart One-Pipe furnace you installed in my home. As you know, our house is on top of a high hill where it has no protection from wind or weather, yet during the past two weeks, with thermometer from zero to 26 below, have kept whole house warm and comfortable without any trouble whatever and with wood for fuel."
(Signed) C. L. CORY,
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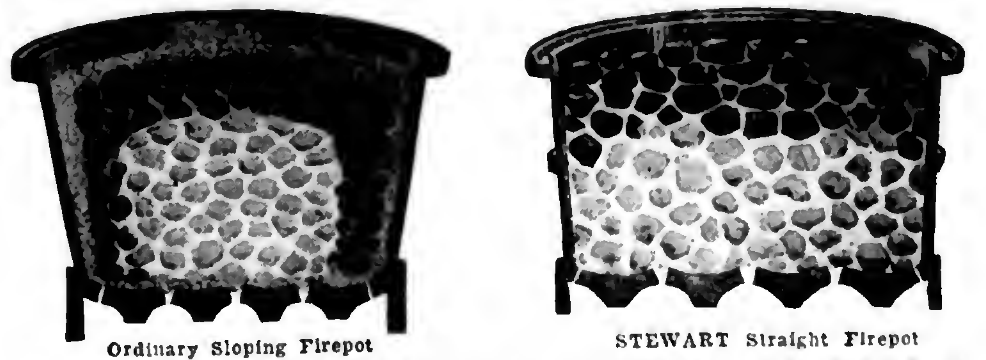
STEWART
TRADE MARK

ONE PIPE FURNACE

Heats Whole House--Keeps Cellar Cool

This Powerful, Durable, NEW kind of Warm-air Furnace that is giving such great satisfaction in thousands of homes, is built by the same old reliable concern that for 88 years has been making the famous STEWART Stoves and Ranges. So you can rest assured it is built RIGHT---it is DEPENDABLE.

Another reason you should BE SURE to get a STEWART ONE-PIPE is because it is from 100 to 300 pounds HEAVIER than most other makes—and THIS EXTRA weight is largely in firepot and grate where naturally the hardest wear comes. Its Large Firedoor accommodates big chunks of WOOD. Its EXTRA LARGE Register insures heat in large volume. And pictured below is still another STEWART feature.



Ordinary Sloping Firepot STEWART Straight Firepot

Above at the left is pictured the firepot of the ordinary pipeless furnace. Note how the sloping sides collect ash, which deadens the fire and prevents proper radiation. Picture at the RIGHT shows the STEWART firepot, built EXTRA heavy and with STRAIGHT sides to increase grate area, coal capacity, heat radiation and assure perfect combustion. This is just one of the many features that make the STEWART ONEPIPE so successful.

Send for FREE Booklet and name of nearest dealer

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How $140,000,000 Can be Added to Dairy Farmers' Profits this Winter.

Four billion pounds more milk—$140,000,000 added profits—may be had this winter by farmers in the principal dairy states, simply by watering cows properly.

A sensational statement! Yet it is but simple fact proven by cow testing and other milk records in many herds.

Water—the simplest means of increasing milk yield, that element which is almost as free as air, yet as important as high priced feed—is usually disregarded by dairymen.

Those dairy farmers who realize how greatly milk flow is increased by James drinking cups are reaping huge profits on their investments.

An investigation made among users of James Cups show an average increase per cow, per day, of 2.45 lbs., proven by the milk records of 28 herds (739 cows).

2.45 lbs. per day is about 490 lbs. for the season, which at $3.50 per cwt. totals more than $17.00.

$17.00 clear profit additional, per cow, secured merely by giving the cow all the water she wants when she wants it.

In this investigation, one herd reported an increase of 5 to 10 lbs. per cow; three reported 4 lbs. average increases; three say 3 lbs., six 2 lbs.; three 1½ lbs., one ¾ lbs.; one $8.56 during the winter; one $5; one $10; one reports 3% increase; one 8%; two 10%; one 12½%; one 20%; and one says 33⅓% increase.

These reports from 28 herds are confirmed by many other reports and investigations, the details of which are set forth in the James Educational Department Bulletin No. 4.

Send for Bulletin No. 4 today, and also ask for

FREE BARN BOOK

This 320 page book tells all about James Drinking Cups and about other James inventions that increase milk yield, save labor, and save feed.

It also contains scores of pictures of barn exteriors and interiors, together with blue prints and many pages of information on barn planning, ventilation, and arrangement.

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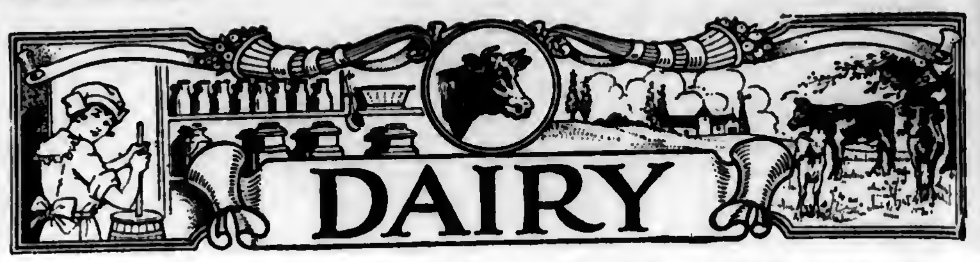


DAIRY

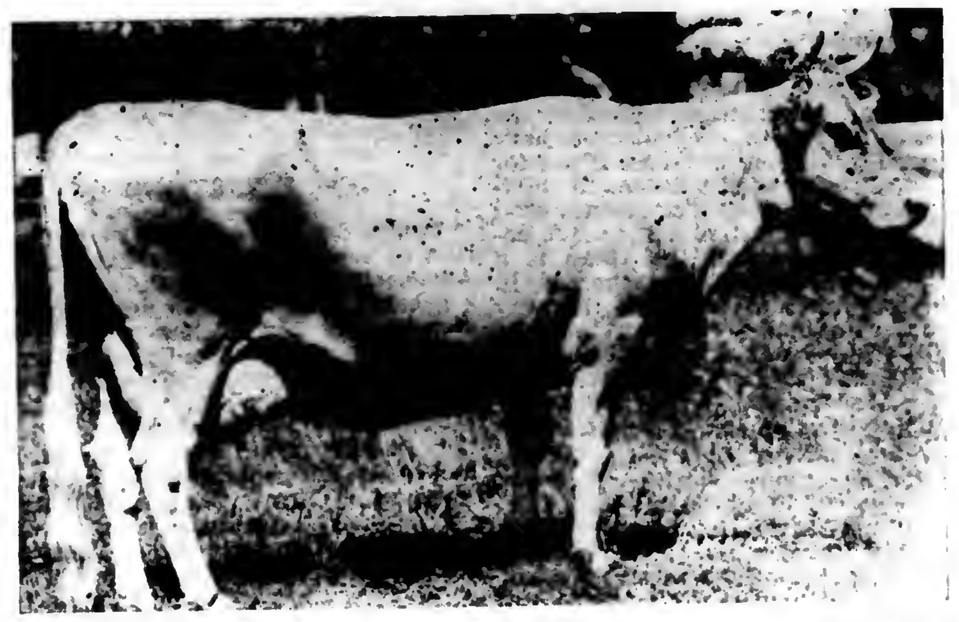
VOTE TO SELL MILK FOR $3.65 PER HUNDRED

The Board of Directors in a special meeting held in New York City on Monday, September twenty-eighth, voted to sell League milk for October for $3.65 per hundred pounds. This is for milk testing three percent butterfat in the 200-210 mile zone. Farmers will receive four cents a point for every one-tenth of one percent above three percent. Those that live beyond the 200-210 mile zone will receive a somewhat less price, depending upon the freight rate to New York, and those that live nearer than the base price zone will receive a little more.

Earlier in the month the Directors had decided to ask $3.85 for October milk. After two weeks' negotiations with the dealers, the League was unable to sell at this price, and altho $3.65 is forty-one cents below the cost of production, yet, because of market conditions, it was thought manufacture condensed milk is that it would bring this milk made with a lower-priced sugar into competition with their high-priced products already in storage. The dairymen believe this one of the strongest arguments for owning their own plants.

If the dairymen had entered into a controversy with the distributors of fluid milk, the cheaper milk now going to manufacturers might be used to defeat the farmers. If the dairymen were successful, the dealers would have forced up the price to the consumer, laying the blame on the farmer. This would have reduced consumption and reacted to the detriment of the dairymen.

The Directors took into consideration the serious market conditions with the rapidly declining prices in all kinds of products produced on the farm or in the factory. They realized that this is the reaction that all have forseen toward lower prices, and their action in establishing the lower price is the result of their apprecia-



Vive La France Long Distance Jersey Cow in 4 Years Produced 52,152 lbs. Milk, 3,596 lbs. Fat.

best not to force the issue to a contest at this time.

Even at the low price at which League milk is offered, all of the milk will not be moved. The manufacturers in League territory have served notice upon the organization that they will not keep their plants open to buy milk at any price until such time as market conditions improve. This means that about twenty-five or thirty percent of the League members will be without their regular market after the beginning of October.

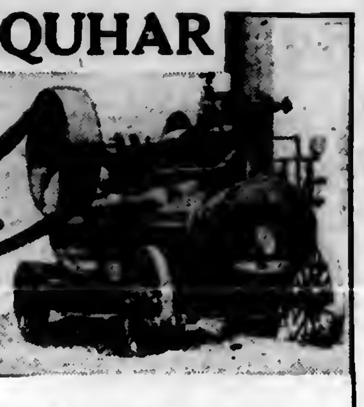
The manufacturers claim that the reason for their unprecedented action is that their European trade has been very greatly curtailed because of the exchange conditions, and that the domestic market is buying little or no manufactured dairy products at this time. This is especially true of condensed and evaporated milk. Manufacturers have very large stocks on hand manufactured with high-priced sugar, and they refuse to add to these stocks with a cheaper product until they are able to liquidate. This throws the burden as usual back upon the producer. He cannot turn off the faucet on the cow at will.

The producer feels the situation keenly because the manufacturers have refused to manufacture condensed milk as trustees for the dairymen, but have offered to manufacture butter. The reason why they will not

tion of the whole situation. It is regretted by them and by all those who are familiar with the farm situation, however, that the farmer was the last to realize on the higher prices due to war conditions. Thousands of them never have benefited by these higher prices because of their extra costs, and now the agricultural interests are the first to suffer when the prices begin to go the other way.

Dairymen all thru the six states occupied by the League are signing almost unanimously the cooperative contract of the Dairymen's League Cooperative Association and the special order on the dealers providing for the blending of the proceeds of every member's milk into a common pool. As soon as this can be made effective, it will save hundreds of members without a market for their product from a tremendous loss, and what is still better, it will provide the first fundamental step for the farmers' owning the country end of their own business, so that they can place it where their markets will not be constantly threatened or interfered with by the dealers, so that dairying will be a safer and more satisfactory occupation.

Whether all signs point to a long winter or not, an abundant woodpile is good insurance. Coal is going to be higher than ever.



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Established 1875.
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MEMPHIS, TENN.

Our Brand on the Tag Means Quality in the Bag

EXCHANGE SITUATION LEADS TO RECORD BUTTER IMPORTS

The record for butter imports established in 1919, when 9,519,368 pounds of butter and butter substitutes were brought into the United States, was short lived. Following the recent announcement of these import figures by the United States Department of Agriculture the department has compiled reports for the first seven months of this year which show that the United States during that period imported 22,855,090 pounds of foreign butter, which is more than ever before.

This remarkable increase is attributed by foreign marketing experts of the department's Bureau of Markets largely to the foreign exchange situation. With American dollars commanding a premium thruout the world it is obviously good business for foreign butter manufacturers to sell their product in the United States. Foreign manufacturers also have the advantage of low cargo rates. Another reason for the increased imports is that whereas England was formerly Denmark's principal butter outlet, England can now purchase butter more cheaply from Australia and Argentina. Ireland also is producing butter on a larger scale.

The effect of the exchange situation is also reflected in a decrease of American butter exports. Thus, 15,529,271 pounds of American butter was exported during the first seven months of 1920, whereas 22,986,294 pounds were sent out of the country during the corresponding period of 1919.

Imports of butter from Denmark are being curtailed at present because the prices asked by the holders of Danish butter in storage here are higher than the wholesale prices for the American product, and some difficulty is being experienced in moving the Danish stocks.

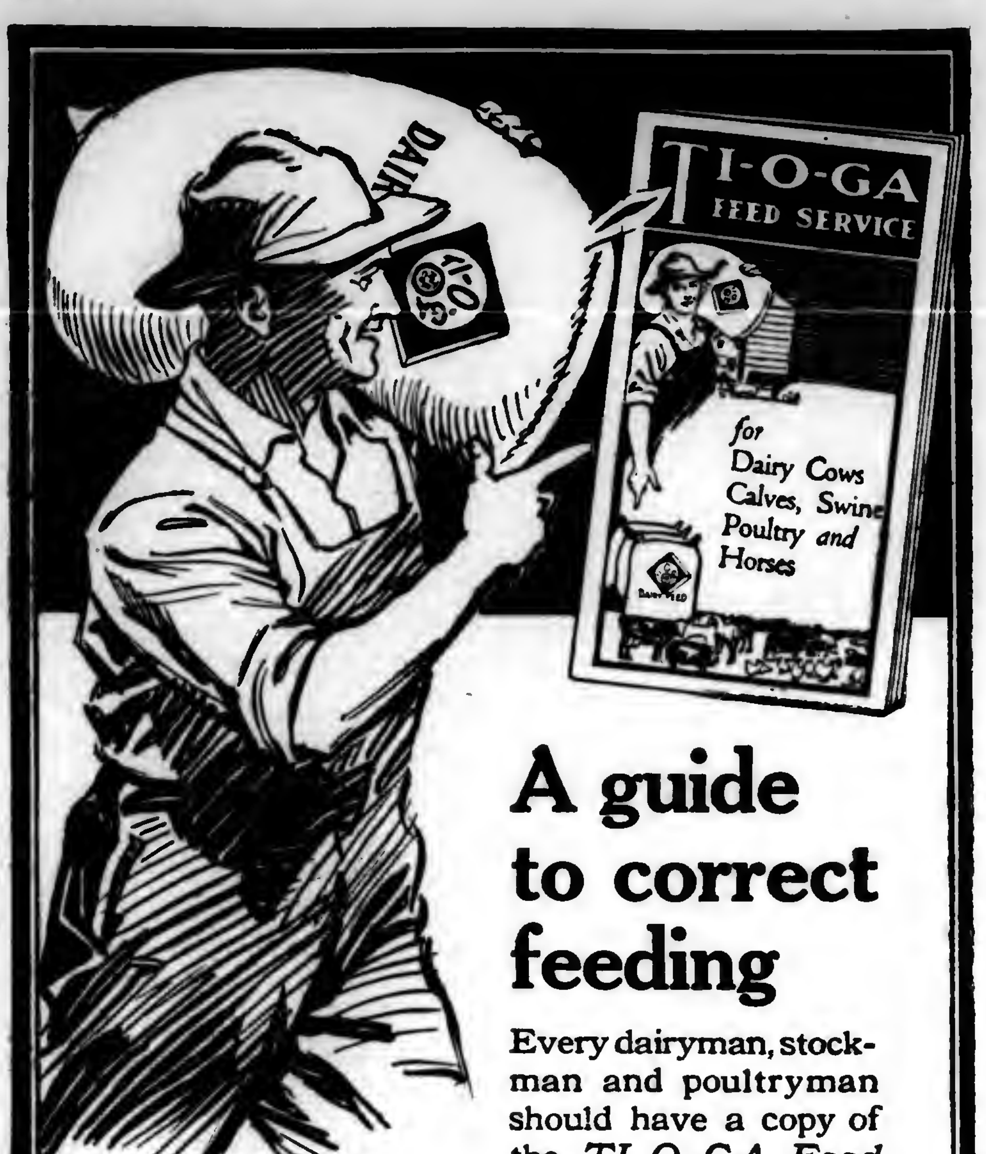
STERILE COWS MADE TO BREED

A leading breeder of registered Holstein Friesian cattle in a northern tier county of Pennsylvania, had seven valuable registered cows which persistently refused to breed. Hearing of the Albrechtsen (douche) treatment for sterility and abortion disease this breeder decided to give it a trial, so called his veterinarian for that purpose. Following careful application of the treatment by the attending veterinarian, six of the cows conceived and delivered strong, thrifty calves. One of the cows that responded to treatment was valued at over $1,000. The seventh cow was found to be permanently sterile and was disposed of for beef; the maintenance expense on her was eliminated.

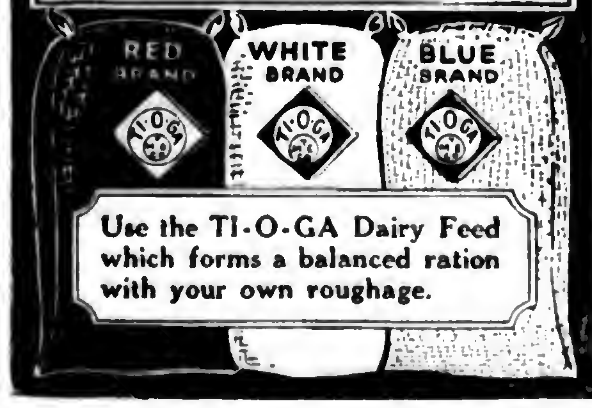
Many breeders have taken advantage of this means of making their herds more prolific and profitable. In addition to determining whether or not cows will breed, it has been demonstrated that most cows when properly treated will not only produce better calves, but will yield more milk than untreated cows.

The Bureau of Animal Industry, Pennsylvania Department of Agriculture, demonstrates the Albretchtsen treatment to practicing veterinarians in the State and they in turn apply the knowledge gained to their clients' cattle.

There would be more sympathy and understanding if every business man read a good farm paper, and if every farmer read a business journal.



DAIRY
TI-O-GA
TI-O-GA FEED SERVICE
for Dairy Cows Calves, Swine Poultry and Horses



A guide to correct feeding

Every dairyman, stockman and poultryman should have a copy of the *TI-O-GA Feed Service* booklet.

From cover to cover it deals with every-day feeding problems and gives instructions for correct feeding of dairy cows, calves, swine, poultry and horses. These instructions are based upon practical feeding determinations which have proven most successful. The booklet shows how greater production and more profit can be obtained from the best use of roughage by feeding the concentrates with them which will form balanced rations.

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For dairy feeding *TI-O-GA Feed Service* starts with the problem of making the best use of home-grown roughage to increase profit and milk production. Roughage varies greatly in nutritive content, and the booklet shows the classifications, and how a grain feed is prepared to form a balanced ration with each class.

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This careful service is furnished through:
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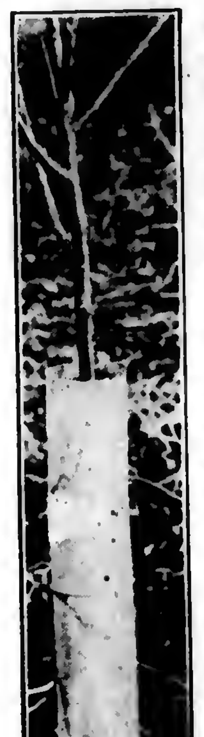
Grape Vines For fall planting: Concord, Catawba, Niagara, Worden. 35c each. $3.75 dozen. $25.00 hundred. Also Strawberry, Raspberry, Blackberry, Gooseberry, Currant, Asparagus, Dewberry, Rhubarb plants. Roses, Pansies, Shrubs. Catalog free. HARRY H. SQUIRES GOOD GROUND, N. Y.

HORTICULTURE

PROTECTING YOUNG TREES IN WINTER



In view of the fact that thousands of fruit trees and many ornamental trees and shrubs as well were ruined by mice last winter, it will be the part of wisdom to adopt some means this fall of protecting trees in the open ground. The damage is done by field mice and as a rule trees close to the house are not attacked, but in orchards of several acres trees are often entirely girdled. Such injury kills the trees unless they can be saved by bridge grafting, which is an expensive and laborious undertaking.

Curious methods of protecting trees from both mice and rabbits have been advocated. They include smearing the trunks with blood or liver and painting them with asafoetida. A mixture of tallow and tobacco is another remedy less disgusting to the nostrils perhaps, but no more effective. In California aloes are mixed with water, one pound to four gallons, to make a wash which is said to be repellant to rabbits. A more common remedy in the east is the common lime and sulphur spray which is used for San Jose scale. Applied to the trunks of the trees in the fall it is a deterrent, especially for rabbits, and worth using in large orchards where more positive control cannot for one reason or another be adopted.

After all, tho, the plan which is to be recommended to all owners of trees which are in exposed positions is to apply some device which will encircle the trunks of the trees. Protectors made of heavy wire are among the best devices to use. They can be applied quickly and will keep away both mice and rabbits. As commonly offered, however, they do not reach very high on the trunks, and sometimes when there are deep snows rabbits will work above them. This fact was shown last winter during which some protected trees were badly injured by rabbits. The snow was so deep, in fact, that the animals were able to nibble the overhanging branches.

Wire cloth can be obtained at any hardware store, and makes a good substitute for the ready made protectors. The home-made guards can be fashioned to reach as high on the trees as the owner may desire. Oftentimes it is possible to buy remnants of wire cloth for two or three cents a yard. This is the most economical way to get the material for making these protectors. They should be cut from seven to nine inches wide, and sixteen or eighteen inches long, according to the size of the tree. An easy way to prepare these strips for use is to place them, one at a time, between straight edged boards. The long edge of the cloth should be allowed to project a little, and another board used to turn this edge down. The purpose of this is to make a selvage so that the guard can be used without the wire ends catching on the clothing or hands.

The protector can be applied more easily if it is shaped before taking it into the orchard. The shaping can be done with a broom handle or a discarded shade roller. Being rolled rather tightly the guard will stay in place after being slipped around the tree trunk. A short piece of wire should also be used at the top and bottom to keep it from spreading again, and if the wires are arranged so that they can be hooked together it becomes an easy matter to apply the guards and to take them off.

In many places wire guards are better than those made of solid material, offering less opportunity for insect pests to lodge on the inside without being detected. Yet under some circumstances a guard or protector made of wood veneer is preferable. These devices can be purchased ready for use, and resist the attacks of mice and rabbits as well as the wire cloth. The advantage of the wood veneer material is found in sections where damage is done as a result of hot sun being reflected from the snow to the trees, causing sun scald. This difficulty is more likely to be encountered in the west than in the eastern states, and the injury done in this way is greater than is commonly realized. The explanation lies in the thawing of the trunks which comes from the reflected sunlight. When night comes on and the sun goes down, the bark is frozen solid again. When this sort of thing continues from day to day the bark is often split open and perhaps killed. Moreover, the cracked bark gives a refuge to fungi and insect pests. Much can be done to prevent this trouble by heading the trees low, but when high headed trees have to be dealt with, it is found a wise expedient to use something like the wood veneer guards, or tar paper, to save the trees from the sun and to protect them from mice and rabbits. Some apple growers often use the tar paper, but there seems to be danger of young trees being injured by this material.

It helps to mound the earth around the base of the tree trunks and then to tramp down the snow when it falls. This is a simple enough matter in a back yard where only a few trees are growing, but of course it hardly would be undertaken on a large place.

In all orchards, however, it is possible to keep the weeds and grass from growing close to the trees, and that in itself will be of considerable benefit in keeping mice away. The less plentiful they will be.

While it may seem a tidy practice to clean up all prunings immediately, it is often found advantageous to allow them to remain on the ground until spring, because mice and rabbits will often feed on them and be satisfied to leave the trees alone.—E. I. F., Mass.

Much trouble in home canning may be literally washed away if all fruits and vegetables are thoroly cleaned when first brought in from the garden.

COVER CROPS ON THE TRUCK FARM

On looking over the farms this year it looks as tho the cover crops will not be planted as in former years. This is due to the labor shortage, and what help is on the farm being used to harvest the abundance produced this year. Much of the seed used for cover cropping is listed cheaper than several years back. In our section a small acreage has been sowed with crimson clover but fields in the majority of cases are so weedy that the farmers say that the weeds are sufficient.

Hairy Vetch sowed late, makes a fine cover crop and where seed is inoculated a fair stand can be assured in most instances. The cucumber patch should be plowed up and sowed to this crop and if this is not available to rye. Insects harboring over on the vines and weeds will be forced elsewhere for nourishment.

When the tomato crop has been harvested the vines should be immediately turned under and the ground sowed to rye unless the ground is sowed to crimson clover or vetch.

At the last cultivation of late crops a cover crop of some sort should be cultivated in to keep up the supply of organic matter so necessary to the improvement of the soil.

We have sowed rye after digging sweet potatoes and late white potatoes as late as the fifth of December. Sometimes the seed did not sprout until the spring but a fair stand was secured.

There are many patches of ground laying idle that should be plowed and sowed if good results are desired next year. Last year we had a poor piece of sandy soil that we plowed late in the fall and seeded to rye. A good stand was secured and this year the soil is in fair shape. Many fields where white potatoes have been dug lay idle and some of them have not even been leveled off. These fields can be seeded very economically.

The early tomato patch should be plowed and seeded as soon as picking operations permit it, and watermelon and cantaloupe patches should be sown to cover crops as well. In many instances sugar corn (either drilled or in hills) is fairly clean. A one horse cultivator can be run thru and rye or vetch sown.

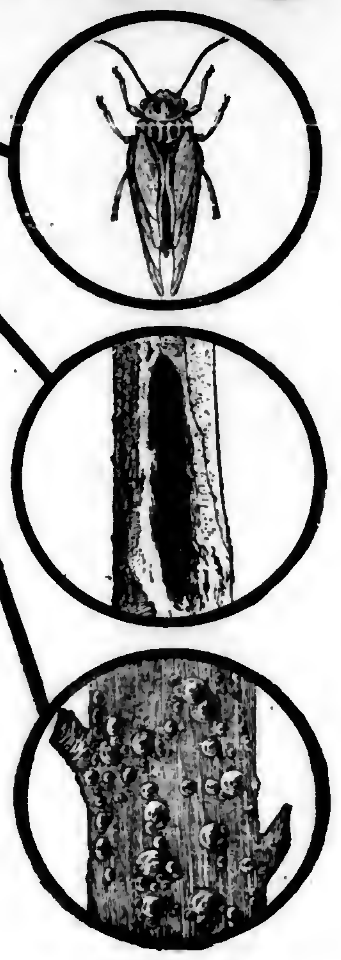
Manure is very high. One reliable concern informed us that the probability is that manure will be sold for cash only next spring. Fertilizer is very high and it behooves the farmer to reduce the cost of these materials to the minimum. Cover crops will help in this result. Fields that are poor and have not raised a good crop this year should be set aside and planted to cowpeas or soybeans the following year.

We had a field on this farm when we first moved here that the neighbors told us would not raise anything but sandburrs. We planted it (thirteen acres) to cowpeas and had a fine crop. For three years afterwards this field produced good crops of trucks.

There is one farm in this vicinity where truck is grown that is sowed all down in hairy vetch. This farm is very sandy and with the use of little fertilizer and manure good crops are grown. The owner of this farm stated that he will not buy any manure next year. He has been buying on an average of ten to twelve carloads of manure a year. Where land is poor and sandy rye will be found to thrive best of the cover crops.—J. E. T., Atlantic Co., N. J.

The Complete Dormant Spray

Controls { Pear Psylla / Fire Blight / Scale



SCALECIDE controls Pear Psylla, when applied in the Fall, by killing the adults before they lay their eggs. (After they lay their eggs in the Spring it is too late.) Scalecide also controls fire blight by penetrating the diseased tissues and killing the hold-over canker from which fire blight is spread. It is not only a contact insecticide for scale, but has fungicidal and germicidal properties too.

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Some Hallowe'en Stunts

Er-r-r-eow-r-r-s-s- s-ol-er-r-e-e-en

"Hail the merry Hallowe'en and its
jolly fun!
Lots of Jack-o'-lanterns here.
Lots of black cats, too, are near.
Oh, the sport's begun!
Watch the witches flitting by.
Each one sailing silently,
Everything but dimly seen,
Now you know is Hallowe'en."

We had such a jolly time last Hallowe'en that I am thinking perhaps some of our young readers might enjoy hearing about it. About thirty boys and girls came to our home on a hay ride, chaperoned by several of the parents of the children. On their arrival instead of being brought into the house for an evening of pleasure, they were told to line up and follow their guide. They were led a circuitous route down a hillside by stepping stones over a creek branch—which caused much merriment, and a few wet feet—and on back into the woods where a blazing fire of cross sticks awaited them. A number of large comical jack-o'-lanterns had been made from pumpkins, and secured to the trees by large spikes. The place was fairly aglow, and the sight of all those boys and girls sitting around the campfire made a picture on one's memory not soon to be forgotten. Stories were told in turn, songs were sung in which all joined, then a large iron kettle was suspended over the fire by a pole supported by two forked sticks on either side, and when the water boiled the kettle was filled with wieners. A quantity of fresh rolls were passed around, with cups of mustard, and the young men were told that if they wished any wieners they must each secure for themselves sharpened sticks and must serve one of the girls. It was surely fun to watch the boys getting their sticks ready and sharpened, and still more fun to watch them "fishing" in that kettle of boiling water for the wieners. If you are ever in doubt as to whether or not such a menu will please a bunch of young folks, their appetites sharpened by a hay ride on a frosty night just try it and see, and be sure to number your rolls and wieners by the dozens. After this course was over boxes of marshalmallows were passed around, and these were placed on the sharpened sticks and toasted over the glowing coals. Then came more songs and witch tales.

By this time the fullness of a silvery old moon made the houseward journey less full of surprises. They all came to the house then, and in the livingroom gathered around our the living room gathered around our lity, and to get good and warm before starting on their homeward ride. Some mischievous scamps siezed upon the opportunity of taking off one of the wagon wheels and hiding it, which necessitated a long search by the boys, but which was all entered into with the true spirit of Hallowe'en.

They all declared it was the jolliest Hallowe'en ever, and it was such little trouble and expense.

Should the hostess wish to add to this entertaining by having a contest of some sort it would be great fun to have a "hay ride party contest," telling them that each answer is a part of what they will go home in.

Questions for Hay-Ride Contest

What each one wants. (Seat).

What the girls desire. (Hub or felloe).

The boy's delight. (Wheels).

The Monday morning caller. (Washer).

The squirrels' delight. (Nuts).

Cream for dessert. (Whip).

What the dyspeptic mustn't do with his dinner. (Bolt).

What we all use besides appetites tonight. (Tongue).

The past tense of our conversation. (Spoke).

Not found in desserts. (Springs).

What hard workers do. (Tire).

What we hope the weather won't do tonight. (Rein).

What worry keeps one on. (Rack).

Several years ago on Hallowe'en I asisted in giving a party where we had the following contest, which was quite exciting. The answers to the questions were objects scattered on a large table in the dining room, giving the appearance of a huge pile of rubbish, and the warning was issued that none must be touched. Slips of paper were handed around on which the questions were written, and the guests were told that answers to all of them were to be found on the dining room table. And the fun we had in the hour that followed! Here are the questions and answers:

1. Departed days. (Calendar).
2. Out for the night. (Candle).
3. We part to meet again. (Scissors).
4. Home of Burns. (Flatiron).
5. A line from home. (Clothes line).
6. Heavenly body. (Dipper).
7. Little peace maker. (Needle and thread).
8. Spring's offering. (Glass of water).
9. Bound to rise (Yeast cake).
10. Things that end in smoke. (Cigars).
11. Reflection. (Mirror).
12. Deer in winter. (Eggs).
13. Part of a base ball game. (Pitcher).
14. A drive thru the woods. (Nail driven thru pieces of wood).
15. A rejected beau. (An old ribbon bow).
16. Common sense. (Pennies).
17. Cole's Memorial of the Great. (Piece of coke).
18. Cause of hilarity .(Whisky bottle).
19. The four seasons. (Salt, pepper, mustard and spice).
20. Assorted liquors. (Slipper, strap, whip, switch).
21. The skipper's home. (Cheese).
22. An absorbing subject. (Blotter).
23. Dancing entertainment. (Ball).
24. Bound to shine. (Stove polish).
25. Sentimental couple. (Spoons).
26. Nothing but leaves. (Tablet).
27. House the colonel lived in. (Corn cob).
28. Cause of the American Revolution. (Tea).
29. A morning caller. (Bell).
30. A solitary figure. (1).

To the one answering most correctly we gave a little book entitled "Bright Minds," full of witty sketches. And to the one having the least we gave as a consolation a dish of ice cream and a piece of cake.—Mrs. Esooe H. Ervin.

CURING MEAT

No matter what method of curing of meat is used the first requisite is proper butchering, bleeding and handling. Improper bleeding causes blood to clot here and there which is more than likely to become tainted and to leave a carcass undrawn longer than is strictly necessary impairs the flavor of the meat. But what I came to tell you is how to sugar cure your meat inexpensively yet equal to the product of the best equipped packing house. This is my mother's true and well tried recipe. Fit your smoke house with shelves slanting slightly so that all blood will drain away from the meat. As soon as meat is cut in proper pieces weigh it carefully and to each 100 lbs. meat mix 8 pounds salt, 2 ounces pulverized saltpetre with sufficient molasses to moisten it. Rub the flesh side of each piece of meat well with this mixture and place the pieces on the shelves singly, skim downward. Rub with the mixture each succeeding day until all is used which is generally the third day, leave on shelves four or five weeks then hang in the usual way. I have known meat cured perfectly in this way when all dry salt meat under cure in the neighborhood spoiled during a spell of warm rainy weather. Spread singly it does not heat during a warm spell as does meat in great bulk.—Mrs. L. E. Armour, R. 1, Many, La.

HOUSING GERANIUMS

Geraniums for planting out of doors next spring, can be kept nicely, if taken up and set in quantity of earth, either in old pails, or tubs; but the pails are very much easier for handling; set them out in the receptacle as, tho in a pot, packing the earth down well and let them set in a shed or cool place until frosts compel their removal to the cellar-watering frequently. I never water them but once after placing them in the cellar. I put them in the warmest place there, on the cellar bottom and when the foliage has died and dried, I remove all the muss. Next spring, when all danger of frosts are over, I set them in my garden and usually have a fine, free-blooming bed of them, until frost comes in the Autumn. Sometimes one or more plants may not survive the winter, but usually they do. I pack all I can into one pail, taking care that the earth is well down around each root. After all are in that I can put in, I fill the pail with dirt, packing down firmly.—M. I. C. A.

Two pieces of ice may be as cold as one piece of the same weight but the one piece will last longer.

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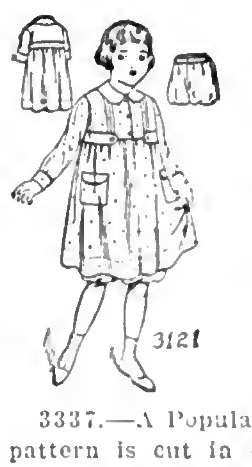
3121.—Neat Bloomer Suit.—Pattern comes in 4 sizes: 4, 6, 8, and 10 years. Size 8 will require 3¼ yards of 36-inch material for the dress, and 1¼ yard for the bloomers. Pattern, 10 cents.



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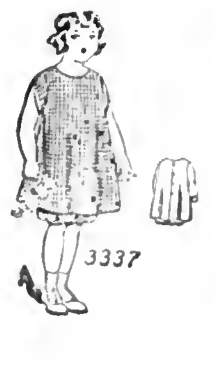
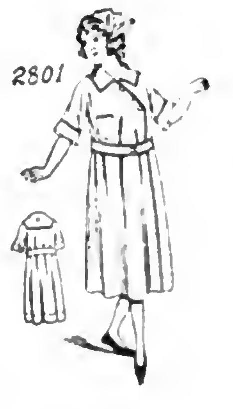


3337

3337.—A Popular Play Suit.—The pattern is cut in 4 sizes: 2, 4, 6, and 8 years. A 6-year size will require 2⅝ yards of 27-inch material for the dress and 1⅜ yard for the bloomers. Checked gingham, striped seersucker, khaki, jean, Indian heac, linen, percale and pongee are desirable for this style. Pattern, 10 cents.

2801.—Girls' Domestic Science Cover-All.—It is cut in kimono style, and the closing may be reversed. Pattern comes in 5 sizes: 6, 8, 10, 12 and 14 years. Size 10 requires 3 yards of 36-inch material. Pattern, 10 cents.



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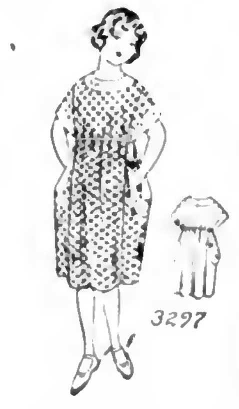

3297

3297.—Another Nice Cover-All For School Cookery Work. Pattern comes in 4 sizes: 8, 10, 12 and 14 years. A 10-year size will require 3⅞ yards of 40-inch material. This model is finished with outstanding pockets. Pattern, 10 cents.

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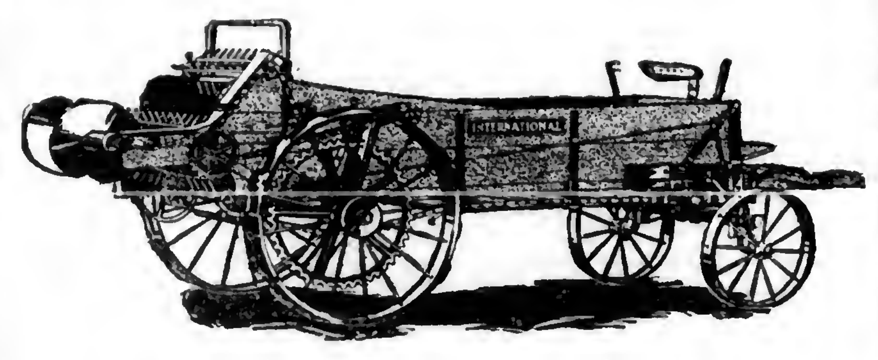

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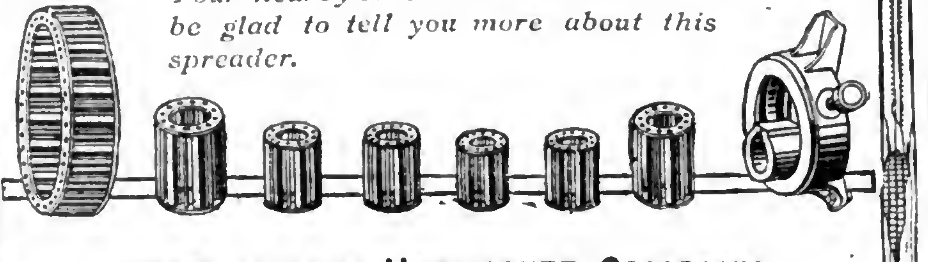

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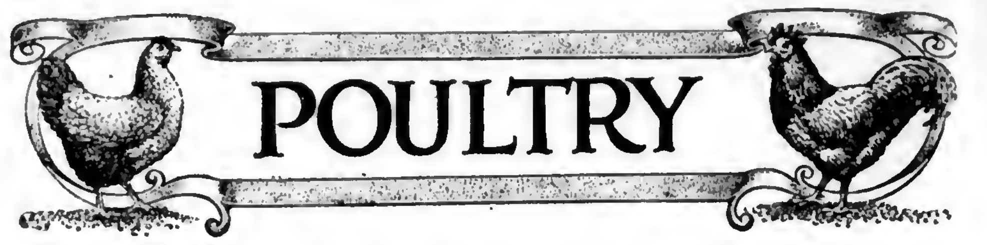
For 55 years *"Dockash"* has stood for quality, workmanship and improvement, none of which have ever been sacrificed for price. The best is the most economical in the long run. It pays to buy for service—*"Dockash"* will give it.

No matter for what purpose, you will find in our line something to suit you.

SCRANTON STOVE WORKS, Scranton, Pa.



POULTRY

OCTOBER POULTRY REMINDERS

By R. G. KIRBY

Hens do not like rye but some poultrymen have found that they will eat as much as twenty-five percent of ground rye if it is ground fine and substituted for the middlings in the dry mash. Hens will also eat some rye if it is soaked or sprouted. But rye brings a good price and in general it is better to sell this grain and use the feeds that hens find more palatable.

* * *

When the ground is dry the worms go deeper and the tender bits of green feed on the range are lacking. Then the range is often more devoid of poultry feed than it seems. If the growing stock are not fed abundantly they become frames decorated with feathers but seriously lacking in plump meat. Such birds are not profitable to market and they do not develop into quality breeders. It takes courage to pour the costly grain into the growing poultry but it is better to properly feed a few birds than to half feed a large flock.

* * *

The use of the dry mash is almost a necessity to develop a large flock of pullets. Many of the birds are shy and will not obtain their full share of scratch grain. If the dry mash hopper is large enough and always filled all of the pullets will have some chances during the day to fill up on a balanced growing mash. It pays to handle the pullets occasionally and see if they are plump and well fed. Nothing is gained by skimping their ration. They must reach laying condition as soon as possible and start paying their board bill.

* * *

Storage room for poultry equipment is necessary. Brood coops should be gathered together where they can be protected as much as possible. Brooders need thorough cleaning and a dry storage room. The incubators must be drained and the metal parts wiped with an oil rag to prevent rusting. Hardware is expensive and all metal dishes deserve protection during the winter. A small soldering outfit is helpful in cutting down the poultry hardware bills as dishes will spring leaks and the best water fountain is no stronger than its weakest point.

* * *

By keeping up the fall campaign against rats and mice it is possible to reduce the free winter boarders to a minimum. Poultry owners must keep considerable grain on hand at all seasons and rats like to be associated with the poultry business. Cleaning up the breeding places is the surest method of keeping down the rat population. They will soon migrate to farms with plenty of outbuildings containing wooden floors.

* * *

Hens can stand a small accumulation of fat in the fall to prepare them to withstand a hard winter. Plenty of feed is necessary for the whole flock and if one or two birds become bagged down with fat it is better to market them at once than to cut down the flock rations and reduce the egg yield. Frequent handling of heavy laying hens will [illegible] the poultryman about the bodily weight of fowls that are in prime condition for egg production. Such birds will be plump and not thin and rough. They will have a layer of fat but not lumps of baggy fat. There are more farm flocks underfed than overfed and the hens living on a balanced ration do not often become too fat to lay.

* * *

Artificial lights in the laying houses have been proven practical for increasing egg production. The lights benefit the birds indirectly by giving them more hours in which to use well balanced rations in a modern poultry house. Without the proper rations and without quality layers the lights will be of little value. Do not force the breeding stock with lights and laying rations if you wish the same birds to produce eggs for hatching next spring.

NEW BULLETINS

The U. S. Department of Agriculture has just issued concise and to the point bulletins which should interest poultry raisers. They are Farmers' Bulletin; No. 1114, "Common Poultry Diseases," No. 1105, "Care of Mature Fowls," and No. 1116 "Selection and Care of Poultry Breeding Stock."

For those who desire more detailed accounts Farmers' Bulletins Nos. 957, 1110, and 1112 respectively give more information on the same subjects. Any of these bulletins may be obtained free of charge by addressing the U. S. Department of Agriculture, Washington, D. C.

COLONY HOUSE FLOORS

When about 100 or more birds are using a colony house with a floor area of about 80 square feet, it means that the floors must be in good condition. A damp floor is soon very unclean. Colony houses must have large open fronts so the rains frequently beat in for a short distance. If the floor is fairly clean it soon dries. If it is covered with unclean litter the house is soon very odorous and unclean and this is bad for the growing stock.

We find that about an inch of sand makes a good covering for a colony house floor. Garden loam is entirely unsatisfactory. It soon changes to dry dust and according to our experience a dusty colony house is the most frequent cause of sore eyes among vigorous growing poultry. If sand cannot be obtained we had rather use a straw litter in the colony house and clean it often enough to keep the straw from becoming tough and damp.

The floor should be built of strong ground on bricks, stones or cement blocks to keep them from being damp and also prevent rats and weasels from hiding under the houses and possibly eating thru the floors. The space under the floor makes fine shade from the growing stock and gives them a place to hide when hawks appear on the range.

The floor should be build of strong matched lumber and properly braced. This prevents draughts from coming up thru the house and keeps the litter and dirt from sifting thru house.

R. G. Kirby, Mich.

COOPERATIVE MARKETING IN CALIFORNIA

By HERMAN STEEN

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"Not so many years ago this was all desert," said J. A. Campbell, president of the Orange County (Calif.) Citrus Growers' Exchange. "The pioneers began growing oranges and the other fruits that are adapted to our conditions. It was hard to get a good market for the crops produced. Seldom did they get a fair price—more often they received only enough to eke out a miserable existence. Out of those intolerable conditions there grew up a system of cooperative marketing which not only brought fair returns to the fruit growers, but it built an industry. The uncertain returns of pioneer days gave way to a situation which seemed almost to guarantee the future. The result has been a tremendous increase in the area devoted to citrus fruits, and as fast as cooperative marketing has been applied to other products those industries also began to prosper. Cooperation has rescued California agriculture from the depths of despair and placed it upon a business basis which has been accompanied by a fair degree of prosperity."

Handled $225,000,000 Cooperatively

Farmers' cooperative companies in California last year marketed approximately $225,000,000 worth of farm products. This is 45 percent of the total farm production of the state. In other words out of every $100 worth of stuff sold, $45 has been handled thru cooperative marketing associations. It is the high-water mark in cooperation in America thus far, and is probably excelled only in Denmark and New Zealand in all the world.

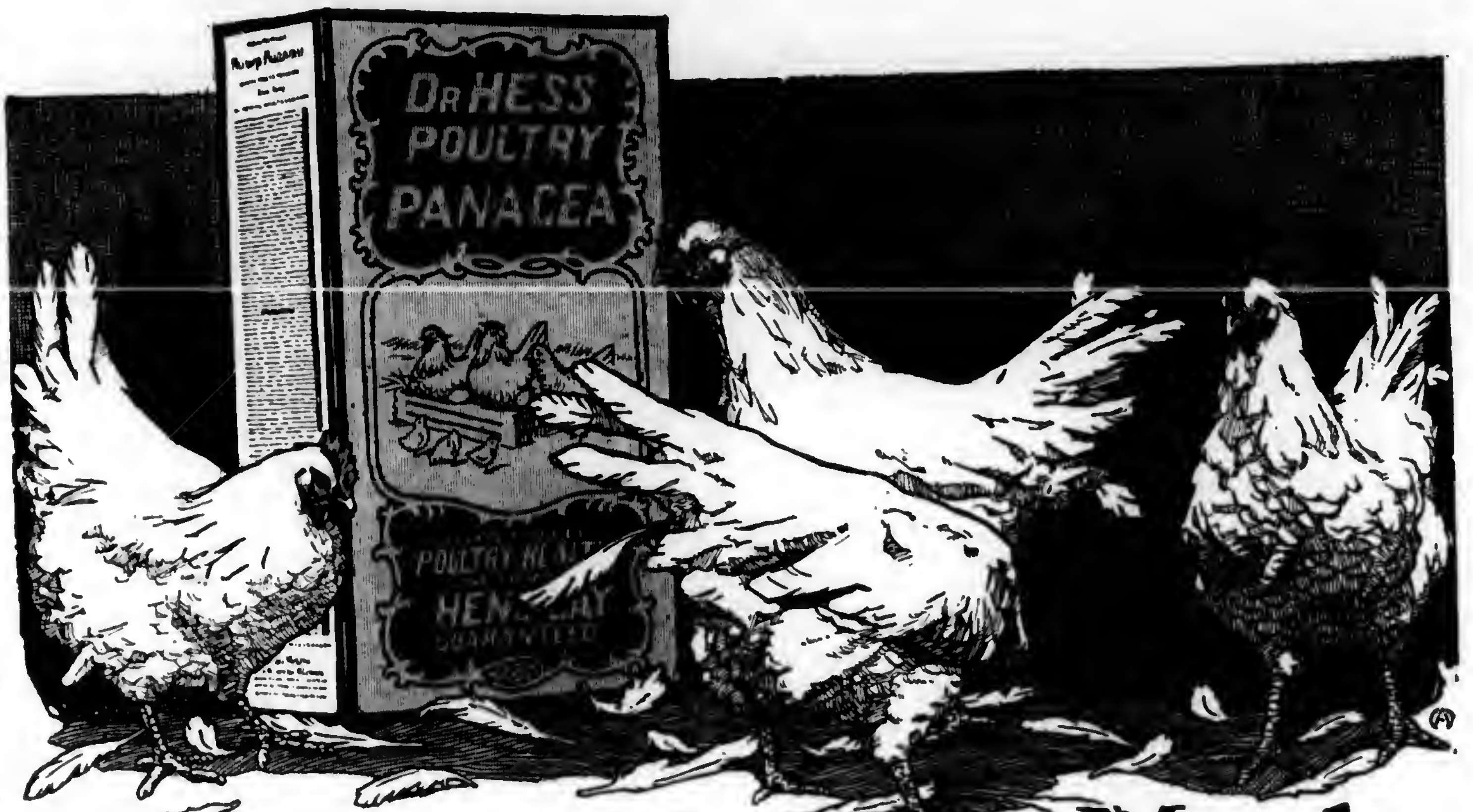
The largest and best known cooperative marketing enterprise in California is the California Fruit Growers' Exchange. It markets 74 percent of the citrus fruit—oranges, lemons, and grape-fruit—produced in California, and during the past 12 months the volume of business handled was in excess of $57,000,000. It was formed in 1895 by the orange growers around Los Angeles because conditions governing the sale of fruit had become intolerable. Prices received were so far below the cost of production that orange groves were abandoned wholesale and many growers were bankrupt. By eliminating speculators and reducing distributing costs, this organization has been able to secure prices for oranges and lemons that are well above the cost of production at least five years out of six, and the thriving condition of the industry is a monument to the effective work done by the exchange. And this is only one of many associations.

Four Fundamental Principles

There are four fundamental things of outstanding importance in practically every one of these cooperative marketing enterprises. These are:

1. These marketing associations [illegible] organized by commodity, and [illegible] locality. Peach growers and [illegible] growers and bean growers live in the same community, but [illegible] market their product thru different cooperative associations. One [illegible] all different crops thru three [illegible] different commodity associations. All leaders in cooperative [illegible] in California, no matter how they differ on other points, are

(Continued on Page 21).



Help your Moulters Moult

Moulting time is the time that a hen needs assistance. She is weak, run-down and out of sorts generally. It is the off-season in the life of the hen.

Think of the amount of a hen's energy, vitality and red blood that's required to reproduce a thousand feathers! (which is only an average plumage).

A moulting hen needs good health, good appetite and good digestion. That's just what Poultry Pan-a-ce-a does for a moulting hen—gives her appetite and good digestion, so that she'll eat more and digest more.

Dr. Hess Poultry
PAN-A-CE-A

Helps your poultry through the moult.—And starts your pullets and moulted hens to laying.

It contains Tonics that produce appetite and good digestion—Tonics that tone up the dormant egg organs—Iron that gives a moulting hen rich, red blood and a red comb: It contains Internal Antiseptics that destroy disease germs that may be lurking in the system.

No disease where Pan-a-ce-a is fed

Pan-a-ce-a helps your poultry to stay at par during the moult. They don't become run-down, pale and thin. That's why a Pan-a-ce-a hen gets back on the egg job quickly instead of sitting around all fall and winter as a bill of expense while regaining her normal vitality.

Always buy Pan-a-ce-a according to the size of your flock. Tell your dealer how many fowls you have. He has a package to suit. Good results guaranteed.

30c, 75c, and $1.50 packages. 25 lb. pail, $3.00. 100 lb. drum, $10.00. Except in the far West and Canada.

DR. HESS & CLARK **Ashland, Ohio**

GILBERT HESS, M.D., D.V.S.

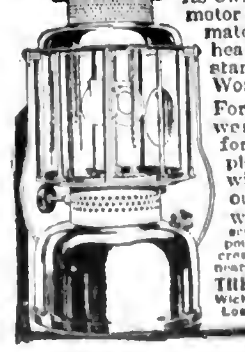
Dr. Hess Stock Tonic
keeps hogs healthy, drives out worms.

Dr. Hess Instant Louse Killer Kills Lice

Get More Eggs

Light the hen house a few hours each night and morning with the Coleman Quick-Lite Lantern. Longer feeding hours increase egg production.

Coleman Quick-Lite
"The Sunshine of the Night"



Brilliant light of 300 candle power. Plenty for hen house of good size. Makes and burns its own gas from common motor gasoline. Lights with matches. Durably made of heavy brass. Mica globe; stands rough handling. Won't blow out in any gale.

For very large hen houses we manufacture the same form of lighting in a complete plant, equipped with fixtures, globes, outside fuel tank, etc.

Write at once for Free Descriptive Circular showing how poultry raisers are reaping increased profits. Address house nearest you. Write to Dept. Clo

THE COLEMAN LAMP CO.
Wichita St. Paul Toledo Dallas
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R. K. TIRES STAND UP!

The R. K. Tire shows the stuff it's made of when it comes to rough, frozen roads. For they're Rebuilt—double tread double chain stitched—so tough they're practically puncture proof.

Yet we guarantee them—even at these little prices:

Size	Non-Skid	Price	Size	Non-Skid	Price
30x3	....	$ 7.00	34x4	....	$11.50
30x3	1-2	8.50	34x4	1-2	13.50
32x3	1-2	9.00	35x4	1-2	11.00
33x4	....	11.50	36x1	1-2	14.50

2 percent off for cash with order.
10 percent deposit required with all C. O. D. orders.

R. K. Tire Company
837 No. Broad St., Dept. A, Phila., Pa.

Send for description booklet and price list. Good Territory Open for Live Agents.

80 A. For $4,500

Coal mine [illegible] Fine location, good build[illegible] Easy terms. Write for [illegible] farms.
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We are making this introductory skirt offer to acquaint women with our fair price methods, our quality and service. We will send you this splendid stylish skirt, subject to your approval and satisfaction. Just send your name and address—giving the size and color wanted, and we will send skirt — all charges prepaid.

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If not perfectly satisfactory — return at our expense and get your money back.

This beautiful skirt is the very latest style, belt trimmed with handsome buckles and silk tassels. Wide heavy inside girdle. Skirt is shirred all around falling in graceful folds; cut full and roomy with extra wide sweep.

Colors—Navy Blue or Black. Sizes 24 to 32 waist; 33 to 40 ins., length. Extra sizes 50c additional. Order by No. 327B51.

The Howard Lux Co., Dept. 327, 310 Lakeside Ave., N.W. Cleveland, Ohio

Whispering Smith

by Frank H. Spearman

(Continued from Last Week)

CHAPTER XXXII

McCloud and Dicksie

"Those are Gordon's initials; it is the signature over which he telegraphs me. You see, this was sent last night long after Blake left. He is safe; I will stake my life on it."

Dicksie sank back while McCloud re-read the message. "Oh, isn't that a relief?" she exclaimed. "But how can it be? I can't understand it at all; but he is safe, isn't he? I was heart-broken when I heard he was killed. Marion ought to know of this," she said, rising. "I am going to tell her."

"And may I come over after I tell Rooney Lee to repeat this to headquarters?"

"Why, of course, if you want to."

When McCloud reached the cottage Dicksie met him. "Katie Dancing's mother is sick, and she has gone home. Poor Marion is all alone this morning, and half dead with a sick headache," said Dicksie. "But I told her, and she said she shouldn't mind the headache now at all."

"But what are you going to do?"

"I am going to get dinner; do you want to help?"

"I'm going to help."

"Oh, you are? That would be very funny."

"Funny or not, I'm going to help."

"You would only be in the way."

"You don't know whether I should or not."

"I know I should do much better if you would go back and run the railroad a few minutes."

"The railroad be hanged. I am for dinner."

"But I will get dinner for you."

"You need not. I can get it for myself."

"You are perfectly absurd, and if we stand here disputing, Marion won't have anything to eat."

They went into the kitchen disputing about what should be cooked. At the end of an hour they had two fires going—one in the stove and one in Dicksie's cheeks. By that time it had been decided to have a luncheon instead of a dinner. Dicksie attempted some soup, and McCloud found a strip of bacon, and after he had cooked it, Dicksie, with her riding-skirt pinned up and her sleeves delightfully rolled back, began frying eggs. When Marion, unable longer to withstand the excitement, appeared, the engineer, flushed with endeavor, was making toast.

The three sat down at the table together. They found they had forgotten the coffee, but Marion was not allowed to move from her chair. When the coffee was made ready the bacon had been eaten and more had to be fried. McCloud proved able for any part of the programme, and when they rose it was four o'clock and too late, McCloud declared, to go back to the office that afternoon.

Marion and Dicksie, after a time, attempted jointly to get rid of him, but they found they could not, so the three talked about Whispering Smith.

Dicksie, insisting upon going home, went so far as to have her horse brought from the stable. To her surprise, a horse for McCloud came over with it. Quiet to the verge of solemnity, but with McCloud following, Dicksie walked with admirable firmness out of the shop to the curb. McCloud gave her rein to her, and with a smile stood waiting to help her mount.

She was drawing on her second glove. "You are not going with me."

"You'll let me ride the same road, won't you—even if I can't keep up?"

Dicksie looked at his mount. "It would be difficult to keep up, with that horse."

"Would you ride away from me just because you have a better horse?"

"No, not just because I have a better horse."

He looked steadily at her without speaking.

"Why must you ride home with me when I don't want you to?" she asked reproachfully. Fear had come upon her and she did not know what she was saying. She saw only the expression of his eyes and looked away, but she knew that his eyes followed her. The sun had set. The deserted street lay in the white half-light of a mountain evening, and the day's radiance was dying in the sky. In lower tones he spoke again, and she turned deadly white.

"I've wanted so long to say this, Dicksie, that I might as well be dead as to try to keep it back any longer. That's why I want to ride home with you if you are going to let me." He turned to stroke her horse's head. Dicksie stood seemingly helpless. McCloud slipped his finger into his waistcoat pocket and held something out in his hand. "This shell pin fell from your hair that night you were at camp by the bridge—do you remember? I couldn't bear to give it back."

Dicksie's eyes opened wide. "Let me see it. I don't think that is mine."

"Great Heaven! Have I been carrying Marion Sinclair's pin for a month?" exclaimed McCloud. "Well, I won't lose any time in returning it to her, at any rate."

"Where are you going?" Dicksie's voice was faint.

"I'm going to give Marion her pin."

"Do nothing of the sort! Come here! Give it to me."

"Dicksie, dare you tell me, after a shock like that, it really is your pin?"

"Oh, I don't know whose pin it is!"

"Why, what is the matter?"

"Give me the pin!" She put her hands unsteadily up under her hat. "Here, for Heaven's sake, if you must have something, take this comb!" She slipped from her head the shell that held her knotted hair. He caught her hand and kissed it, and she could not get it away.

"You are dear," murmured Dicksie, "if you are silly. The reason I wouldn't let you ride home with me is because I was afraid you might get shot. How do you suppose I should feel if you were killed? Or don't you think I have any feeling?"

"But, Dicksie, is it all right?"

"How do I know? What do you mean? I will not let you ride home with me, and you will not let me ride home alone. Tie Jim again. I am going to stay with Marion all night."

CHAPTER XXXIII

The Laugh of a Woman

Within an hour, Marion, working over a hat in the trimming-room, was startled to hear the cottage door open, and to see Dicksie quite unconcernedly walk in. To Marion's exclamation of surprise she returned only a laugh. "I have changed my mind, dear. I am going to stay all night."

Marion kissed her approvingly. "Really, you are getting so sensible I shan't know you, Dicksie. In fact, I believe this is the most sensible thing you were ever guilty of."

"Glad you think so," returned Dicksie dryly, unpinning her hat. "I certainly hope it is. Mr. McCloud persuaded me it wasn't right for me to ride home alone, and I knew better than he what danger there was for him in riding home with me—so here I am. He is coming over for supper, too, in a few minutes."

When McCloud arrived he brought with him a porterhouse steak, and Marion was again driven from the kitchen. At the end of an hour, Dicksie, engrossed over the broiler, was putting the finishing touches to the steak, and McCloud, more engrossed, was watching her, when a diffident and surprised-looking person appeared in the kitchen doorway and put his hand undecidedly on the casing. While he stood, Dicksie turned abruptly to McCloud.

"Oh, by the way, I have forgotten something! Will you do me a favor?"

"Certainly! Do you want money or a pass?"

"No, not money," said Dicksie, lifting the steak on her forks, "though you might give me a pass."

"But I should hate to have you go away anywhere—"

"I don't want to go anywhere, but I never had a pass, and I think it would be kind of nice to have one just to keep. Don't you?"

"Why, yes; you might put it in the bank and have it drawing interest."

"This steak is. Do they give interest on passes?"

"Well, a good deal of interest is felt in them—on this division at least. What is the favor?"

"Yes, what is it? How can I think? Oh, I know! If they don't put Jim in a box stall tonight he will kill some of the horses over there. Will you telephone the stables?"

"Won't you give me the number and let me telephone?" asked a voice behind them. They turned in astonishment and saw Whispering Smith. "I am surprised," he added calmly, "to see a man of your intelligence, George, trying to broil a steak with the lower door of your stove wide open. Close the lower door and cut out the draft thru the fire. Don't stare, George; put back the broiler. And haven't you made a radical mistake to start with?" he asked, stepping between the confused couple. "Are you not trying to broil a roast of beef?"

"Where did you come from?" demanded McCloud, as Marion came in from the dining-room.

"Don't search me the very first thing," protested Whispering Smith. "But we've been frightened to death here for twenty-four hours. Are you really alive and unhurt? This young lady rode in twenty miles this morning and came to the office in tears to get news of you."

Smith looked mildly at Dicksie. "Did you shed a tear for me? I should like to have seen just one. Where did I come from? I reported in wild over the telephone ten minutes ago. Didn't Marion tell you? She is so forgetful. That is what causes wrecks, Marion. I have been in the saddle since three o'clock this morning, thank you, and have had nothing for five days but raw steer garnished with sunshine."

The four sat down to supper, and Whispering Smith began to talk. He told the story of the chase to the Cache, the defiance from Rebstock, and the tardy appearance of the men he wanted. "Du Sang meant to shoot his way thru us and make a dash for it. There really was nothing else for him to do. Banks and Kennedy were up above, even if he could have ridden out thru the upper canyon, which is very doubtful with all the water now. After a little talk back and forth, Du Sang drew, and of course then it was every man for himself. He was hit twice and he died Sunday night, but the other two were not seriously hurt. What can you do? It is either kill or get killed with those fellows, and, of course, I talked plainly to Du Sang. He had butchered a man at Mission Springs just the night before, and deserved hanging a dozen times over. He meant from the start, he told me afterward, to get me. Oh, Miss Dunning, may I have some more coffee? Haven't I an agreeable part of the railroad business, don't you think? I shouldn't have pushed in here to-night, but I saw the lights when I rode by awhile ago; they looked so good I couldn't resist."

McCloud leaned forward. "You call it pushing in, do you, Gordon? Do you know what this young lady did this morning? One of her cowboys came down from the Cache early with the word that you had been killed in the fight by Du Sang. He said he saw you drop from your saddle to the ground with Du Sang shooting at you. She ordered up her horse, without a word, and rode twenty miles in an hour and a half to find out here what we had heard. She 'pushed in' at the Wickiup, where she never had been before in her life, and wandered thru it alone looking for my office, to find out from me whether I hadn't something to contradict the bad news. While we talked, in came your despatch from Sleepy Cat. Never was one better timed! And when she knew you were safe her eyes filled again."

Whispering Smith looked at Dicksie quizzically. Her confusion was delightful. He rose, lifted her hand in his own, and, bending, kissed

They talked till late, and when Dicksie walked out on the porch McCloud followed to smoke. Whispering Smith still sat at the table talking to Marion, and the two heard the sound of the low voices outside. At intervals Dicksie's laugh came in thru the open door.

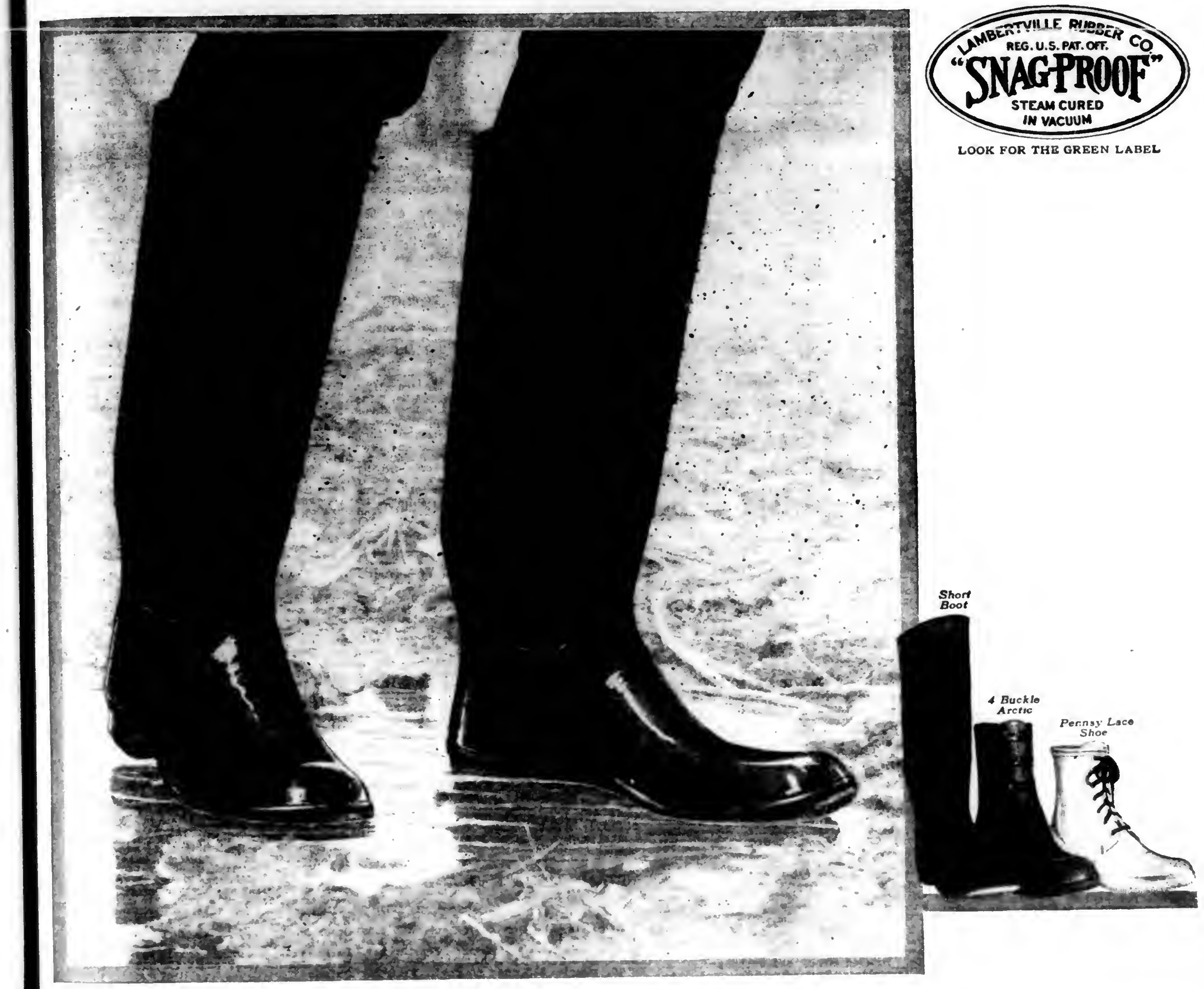
Whispering Smith, listening,

(Continued Next Week.)

"SNAG-PROOF" Rubber-Footwear

LAMBERTVILLE RUBBER CO.
REG. U.S. PAT. OFF.
"SNAG-PROOF"
STEAM CURED
IN VACUUM

LOOK FOR THE GREEN LABEL



Have You Ever Compared Leather Shoes With Snag-Proofs?

LEATHER is high. Snow, sleet and slush ruin leather shoes. They can't keep your feet warm in mean weather.

Snag-Proof rubber footwear has not advanced in cost anywhere nearly as much as leather. Yet it is more comfortable, warmer and gives better service during winter. No matter how bad the weather is, if you are wearing Snag-Proof rubber boots, shoes or arctics, your feet are kept warm, dry and snug.

And you can't get better rubber footwear than Snag-Proof. Nearly fifty years of progressive study have enabled us to make truly exceptional rubber footwear. The green Snag-Proof label is on every boot, shoe and arctic. Look for it.

Have you met the Snag-Proof dealer in your town? His proud boast is that once he sells a man a Snag-Proof boot, shoe or arctic, he has made a permanent, satisfied customer. Let him show you the footwear that will please you in every respect. He has the right style and grade to fit your need at the price you want to pay. Look him up.

LAMBERTVILLE RUBBER COMPANY
Lambertville, New Jersey

Markets

PHILADELPHIA PRODUCE

—October 4, 1920

The supplies of potatoes do not appear to be as heavy as they were a week ago, and prices are ruling firmer and somewhat higher. Most of the supplies at the present time are from New Jersey, Pennsylvania and New York state. Unfortunately, some of the Lehigh County, Pennsylvania stock is very poor and such has to be sold at very low and irregular prices, but potatoes from other points in Pennsylvania are commanding top market prices, best selling at $1.75@1.90 per cwt. for bulk stock. New Jersey potatoes in 150-pound sacks are selling at $2.25@2.55 per sack for No. 1s, with No. 2s at $1.30@1.50 per sack. New York state potatoes are selling at $3 per 150-lb. sack for best, with others at $1.40@1.50 per cwt. The nearby Pennsylvania and New Jersey farmers are hauling in their quota of potatoes and such are selling at 60@85c per ⅝-basket on No. 1s, and 30@45c per basket on No. 2s.

Practically the only sweet potatoes on the market are nearby New Jerseys which are selling at 75c@$1.25 per ⅝-basket on primes, and 40@60c per basket for No. 2s and mediums. There are an occasional lot of Eastern Shore sweet potatoes coming which are selling around $3@4 per barrel.

Vegetables.—The season for nearby grown green and wax beans is nearly over, and most of the remaining supplies are poor with the result that most beans only sell from 25@75c per ⅝ basket, with the few lots of good beans that are still coming readily bringing $1@1.25 per ⅝ basket. Beets are in slow demand at 2½@3½c per bunch, or 40@60c per ⅝-basket. Cabbage is moving slowly at 3@7c per head for the nearby stock, with the New York state cabbage selling from $10@13 per ton. Some extra fancy New Jersey cabbage sells at 30@40c per ⅝-basket, with most sales however at 15@25c per basket. Good carrots are in light supply and firm, best selling at 90c@$1 per ⅝-basket, with poorer at 60@75c per basket. Cauliflower is in moderate supply and steady at $2@2.50 per crate. Fancy celery is firmer selling up to 75@85c per bunch for best stock, with smaller celery selling at 25@60c per bunch. Corn is getting poor and sales range all the way from 30@80c per ⅝ basket with Pennsylvania bag corn selling at 75c@$1.50 per 100 ears. Cucumbers are in light supply and firmer selling up to $2.25 per bushel with the dills up to $2.75 per bushel. Egg plants sell at 40@50c per basket for best with poorer at 25@30c per basket. Horseradish is scarce and wanted, some selling up to $25 per barrel. Lettuce is lower under heavier supplies selling from $1@2 per box. Fancy lima beans are firm at $2.75@3 per ⅝-basket with bushel hampers selling at $3.50@4.50 per hamper. Onions are plentiful and meeting a moderate demand at $1.25@1.75 per 100-pound sack, with the nearby New Jerseys selling generally at 40@65c per ⅝ basket. Parsley is showing no material change at 1½@2½c per bunch. Parsnips are in light supply and selling at the good price of 75c@$1 per ⅝ basket. Peas are very scarce, a few from the Eastern Shore section selling up to $4 per bushel hamper. Peppers are plentiful and weak at 15@40c per ⅝ basket for the green peppers with the red peppers selling at 35@60c per basket. Pumpkins are improving in demand and selling at 25@40c per ⅝ basket, with the large selling at 10@15c each. A few radishes are on the market and selling mostly around 1@2½c per bunch. Tomatoes are getting poor and selling mostly at 25@75c per ⅝ basket, with fancy at $1@1.50 per basket. Green tomatoes sell very slowly at 25@35c per basket. Squash is in light supply and firmer at 30@75c per basket. Turnips have been increasing in supply and market easing off. Today, however, they were a little less plentiful and prices were firmer at 40@60c per basket for the white turnips with the yellows selling mostly at 50@60c per basket except for extra fancy Pennsylvania stock which sold up to 90c@$1 per basket. Spinach is fairly active at 65@85c per ⅝ basket, with bushel hampers bringing 75c@$1. A little watercress shows up occasionally and brings around 2½@3c per bunch.

Fruits.—The market is abundantly supplied with apples and low prices are prevailing. Supplies are coming from New York, New Jersey, Pennsylvania, Delaware, Maryland and the Virginias. Outside of a few marks of extra fancy apples the market is generally slow, with common and ordinary apples having no settled values, and in some instances the dealers were accepting best obtainable offers to sell their supplies. Sales of different varieties today were being made as follows: Barrel apples: Alexanders, $3.50@4.50; Grimes Golden, $2.75@5, a few at $5.50; Jonathans, $3.50@7; Winter Bananas, $3.75@6; Gravenstein, $3.25@4.50; Detroit Red, $2.50@3.50; Wealthy, $3@4; Snow, $4; York Imperials, $3.50; Bonums, $3@4; Pound Sweet, $3. Bushel apples: Blush, $1@1.50; Wealthy, 90c@$1.25; Twenty Ounce, 75c@$1; Gravenstein, 75c@$1; Wolf River, $1; Alexander, 90c; Gideon, $1.10; York Imperials, 50c@$1; Pippins, 85c. Various other varieties 50c@$1. Nearby ⅝ baskets mostly 15@75c, with some fancy up to $1. Crabapples are in light supply and bringing $2.50@3 per bushel, or $2@2.25 per ⅝ basket. Peaches are getting poor as it is late in the season, and while one car of New York state Elbertas sold today at $2.75@3 per bushel, most peaches sold from $1.50@2.25 per bushel, with some very poor down to 50c per bushel. Plums are also nearly over for this season and selling at the wide range of 50c@$2.25 per bushel as to quality, most being poor. Cranberries are meeting slow sales at $2.50@3 per crate. Quinces are in light supply, best selling at $3.75 per bushel with poor down to $2.75 per bushel. Pears are about steady with best Bartletts bringing $2@3 per bushel, and Seckels $1.50@2.50, with some Sheldons at $2@2.50, and other kinds of pears mostly $1@1.50 per bushel. Grapes are in very good demand at $1@1.45 per 12-qt. basket, and 18@28c per small pony basket.

Poultry.—Fancy large fowls are meeting an active demand and selling promptly at 40@42c per pound, with medium and smaller sizes ranging on down to 34@38c per lb. The supplies of spring chickens have been showing some increase and the market is ruling a little easier by reason thereof, fancy large chickens selling at 35@36c per pound, with medium sizes at 32@34c, and small sizes and leghorns at 30@33c per pound. Ducks are showing no change at 30@34c per pound.

Eggs.—Strictly fine fresh eggs are meeting a firm demand and the market is ruling strong and active at somewhat higher prices than those prevailing a week ago. At this writing Pennsylvania and other nearby current receipts are selling at 62c per dozen, with firsts at 63@65c, and fancy candled and selected eggs at 74@75c per dozen. Western eggs are also in good demand at 60@62c for firsts and 63@65c per dozzen for extra firsts.

LANCASTER PRODUCE

—October 2, 1920

Despite the fact that the county fair interrupted farm work there was a good attendance of farmers at both the curb and central markets and the usual choice supply of fruits and vegetables were on sale. Buyers were out in force and trading was brisk. Peaches and apples still held the lead in supply closely followed by potatoes, tomatoes and corn. Prices have changed little since last week. The quotations:

Butter.—Country, 68@75c; creamery, 70@75c.

Eggs.—Country, fresh, 70@75c; mostly, 70c.

Poultry.—Dressed $1@2 each; broilers, 75c@$1 each; squabs, 25@50c each.

Vegetables.—Beans, 20@25c per ½ pk.; yellow wax, 20@25c per ½ pk.; lima beans, 40@50c qt. Red Beets, 5c bch. Cabbage, 5@10c head. Cauliflower, 10@25c head. Corn, 20@25c doz.; mostly 25c. Celery, 5@15c stalk. Cucumbers, 1@3@5c each; pickles, 10c doz.; 40@75c per 100.

Carrots, 5@8c bch. Egg Plant, 10@15@20c each. Lettuce, 5@10@15c head; Endive, 5@10c head. Peppers, 1@3@5c each. Potatoes, $1.25@1.40 bu. No. 2, 20@25c ½ peck; culls low as 50c. Sweet potatoes, 25@40c per ½ peck. Parsley, 3@5c bch. Summer Squashes, 5@10c each. Spinach, 20c per ½ peck. Tomatoes, 10@15c per ½ pk. ⅝ basket, 50@75c. Turnips, 30c per ½ peck.

Fruits.—Apples, Rambos, 20@30c per ½ peck; Duchess, 20@25c. per ½ peck; crab apples, 20@25c per ½ peck. Elderberries, 10c qt. Grapes, Concord, 10c qt; Niagaras, 15c qt; ⅝ basket, $1.75; per bu., $3@3.25. Huckleberries, 35@40c qt. Pears, 25@30c per ½ peck. Bartlet, 30@40c per ½ peck; $1.75 per ⅝ basket. Peaches, 10@15c qt; 20@25c ¼ peck. Bushel, $2.50@3. ⅝ basket, $1.25@2; some $1. White varieties $1.25@1.75 per ⅝ basket.

NEW YORK PRODUCE

—October 2, 1920

Butter.—Firm; receipts, 7,572 tubs; creamery, higher than extras, 62@62½c; extra (92 score), 61@61½c; first, (88 to 91 score), 51½@60c; packing stock, current make, No. 1, 40s.

Eggs.—Firm; receipts, 8,354 cases; fresh-gathered extra first, 63@65c; do first, 58@62c; state, Pennsylvania and nearby western hennery, white, first to extra, 82@92c; do., brown, extra, 72@78c; do., gathered brown and mixed colors, first to extra, 58@67c.

Cheese.—Irregular; receipts, 1,562 boxes; state, whole milk flats, current make, white and colored, specials, 28½@29½c; do., average run, 27½@28c; do., whole milk, twins, current make, specials, 28¼@28½c do., average run, 27½@28c.

Poultry.—Live, steady; chickens, by freight, 34@36c; do, express, 34@37c; fowls, 40@43c; old roosters, 22c; turkeys, 40c. Dressed steady and unchanged.

Vegetables.—Potatoes, bbl., L. I., bbl., $3.62@4. Jy, round, 165-lb., $3@3.75. Jy, long, 165-lb. $2.50@3.25, No. 2, $1@1.35. Sweets, Jy, 1s, bbl., $4.50@5.50 Jy, 2s, bbl., $2.50@3. Brussels Spts., State, qt., 5@20c. L. I., qt., 5@20c. Beets, bbl., $2@2.50. Carrots, nby, 100, $2@4; nby, bbl., $2@2.50. Corn, Jy, 100, $1@2. Celery, crt., state, bch., 15@65c; Jy, bch., 15@65c. Cabbages, L. I., bbl., 50c@$1; L. I., 100, $1.50@2.50; Jy, bbl., 50c@$1; Red, bbl., $1@1.75. Cauliflowers, nby, crt., 75c@$3; State, crt., $1@2.50. Egg Plants, Jy, box, 50@75c. Lima beans, Jy, bskt., $2@4; L. I., bskt., $2@4.50. Lettuce, State, crt., $1@3. Onions, Wh., bsk., 75c@$1.75; Yel., bskt. 75c@$1; Red, bsk., 75c@$1.25; Pumpkins, Cheese, $1.25@1.50. Turnips, White, 100 bchs., $2@4. Tomatoes, nby, bush., box, $1@3.50.

Fruits.—Apples, bsk., fcy, $1.25@1.50 bsk., avg., 75c@$1; bbl., fcy, $4.25@7; bbl, avg., $2.50@4; boxes, $3@4.25. Pears, boxes, $2.75@3.25; baskets, $1.50@2.50. Barrels, $4@9.

YORK PRODUCE

—October 2, 1920

There has been little change in the selling conditions of all produce. Potatoes are still seeking a lower level; while apples seem to be holding their own. Eggs are advancing slightly.

Eggs.—70@75c per dozen.

Butter.—Separator, 70@75c lb.; Country, 60@65c lb. Milk, 14c quart.

Poultry.—Dull market; hens, 26@28c lb.; springers, 30@35c lb.; dressed, $1@2 each.

Vegetables.—Potatoes, 15@20c ½ pk.; $1@1.40 bu.; lettuce, 5@10c hd.; cabbage, 5@10c hd.; radishes, 6c bch.; beets, 5c bx; onions, 5c bch.; 20c ½ pk.; corn, 20@40c dozen; peas, 25@35c ½ pk.; beans, 25@30c ½ pk.; peppers, 15@20c doz.; lima beans, 40c qt.; egg plants, 4@10c each; squash, 3@5c each; cucumbers, 75c@$1 per 100; ham, sliced, 45@80c; whole, 40@45c lb.; lard, 28c lb.

Fruit.—Apples, 10@40c ½ pk; much cull stock on the market; pears, 10@15c box; 25@30c ½ pk.; plums, 12@15c qt.; peaches, 25@30c ¼ pk.; $1.50@2.25 bask.; tomatoes, 10@15c ¼ pk.

Retail Grain Market—Wheat, $2.15@2.50; corn, $2; oats, $1; rye, $1.75; bran, $3 per cwt.; middlings, $3.75 cwt.

Wholesale Grain Market—Wheat, $2.15; corn, $1.25; oats, 75c; rye, $1.40; bran, $56 per ton; middlings, $65 per ton.

PITTSBURGH PRODUCE

—October 2, 1920

Butter and Cheese.—Prints, 66@66½c; tubs, 65@66c; cooking, 55@56c; Ohio, 61½@62½c; Phila. cream, doz., $1; Longhorns, 32@33c.

Eggs.—Fresh select, 67@68c; current receipts, 59@60c; specials at mark, 57@58c

Live Poultry.—Small hens, lb., 38@40c; do, heavy, 40@42c; broilers, lb., 38@40c; roosters, lb., 23@25c; geese, lb., 25@30c; turkeys, lb., 40@45c; ducks lbs., 35@40c; guineas, each, 75c@$1.

Dressed Poultry.—Hens, lb., 45@50c; roosters, lb. 28@35c; springers, lb. 45@50c; ducks, spring pound 50c; turkeys, pound, hog-dressed, 60c.

Fruits.—Apples, bu., $1@1.50; do., bbl., $3.50@5; do, crab, bu. $2.75; plums, h. g., bushel, $1@2.50; do., Damson, 20-lb. bas., 75c@$1; do, bushel, $1.50@3.50; pears, Bartlett, Oregon, box, $5@6; do., New York, bushel, $3.25@3.50.

PHILADELPHIA LIVESTOCK

—October 2, 1920

Receipts of the week ending Oct. 2nd, 1920, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Totals for week	2,181	8,205	7,183
Previous week	2,796	9,403	8,009

Calves.—Receipts of calves were 2,502 head against 1,696 head previous week.

Beef Cattle.—Offerings of steers and cows were ample for trade requirements and the market was quiet, with some kinds slightly easier. Veal of fine quality was steadily held. but supplies were largely of medium and under grades, which were dull and irregular in value. Quotations: Steers, good to choice, $14@15.50; fair to good, $12@14; common to fair, $10.50@12; cows, good to choice, 8½@9½c; do., fair to good, 7@8½c; bulls, 7@9c; calves, extra to choice, $19@20; fair to good, $16@18; common, $12@13; Tennessee, $16@17; other southerns, $8@13.

Sheep and Lambs.—The market for sheep and lambs ruled steady under moderate supplies and a fair demand for choice stock. Quotations Sheared sheep, wethers, extra, $8.50@9; do., good to choice, $7@8; medium, $5@6; do., common, $2@3; ewes, heavy, fat, $5.50@6; lambs, spring, choice, West Virginia, $13.50@14; choice, Pennsylvania, $13@13.50; medium, $11.50@12.50; common, $8@10.

Hogs.—Demand was light and the market wasweak and lower under liberal offerings and easier outside advices. We quote: Best western, $18.50@19; nearby, $17@17.50.

City Dressed Stock.—Steers, heifers and cows were dull and unchanged with liberal supplies. Lamb was weak and easier. Other kinds sold slowly and showed no important change. We quote: Steers, 22@30c; heifers, 18@26c; cows choice, 18@21c; cows, light, 12@16c; calves, city dressed, choice, 30@32c; calves, country dressed, 27@29c; lambs, spring, choice, 26@28c; sheep, 20@28c; hogs, 26c.

PHILADELPHIA HAY AND GRAIN

—October 2, 1920

Baled Hay and Straw.—Receipts, 120 tons of hay and 2 cars of straw. Quiet and quotations unchanged as follows: Timothy hay, No. 1, none here; No. 2, $31@32; No. 2, $27@29; sample, $23@25; no grade, $18@21; clover-mixed hay, light mixed, $29@30; No. 1 mixed, $27@28. Straw —No. 1 straight rye, $19@19.50; No. 2 do, $17@18; No. 1 tangled rye, $16@17; No. 2 do., $15.50@16; No. 1 wheat straw, $16@17; No. 2 do., $15.50.

Bran.—Sold slowly at late decline. We quote as follows: Car lots, including sacks; Soft winter bran, western, in 100-lb. sacks, per ton, $47@48; spring bran, in 100-lb., sacks, per ton, $46@47.

Corn.—No. 1 yellow, $1.30@1.35.

Wheat.—New; No. 2 red winter, $2.33@2.40; No. 2 red winter, garlicky, $2.18@2.23.

Oats.—No. 2 white, 65@66; No. 3 white 64@65c.

NEW YORK HAY AND GRAIN

—October 2, 1920

Feed.—The market for mill feed was inactive, altho prices were weak and both American and Canadian mills are evidently trying to induce buyers to take hold in order that they may move some of the feed which is accumulating despite the reduced output.

Quotations: City feed bran, $48; middling, $56, in 10-pound sacks; Western spring bran $43; standard middling, $50; flour midding, $61.50; red dog, $78, all in 100-pound sacks, 30-day shipment. Oat feed, $24; rye middlings, $55; white hominy feed, $51, all in 100-pound sacks. Cottonseed oil meal, $60; linseed oil meal, $60, in 100-pound sacks.

Hay and Straw.—Receipts continue heavy at all harbor points, trade is still pounding the market and values are barely sustained. In Brooklyn prices are little more than even with 33d Street shed, and at all points our outside quotations on No. 3 and shipping hay are extreme. Rye straw a little more plentiful and no more than steady.

Hay—Large Bales. Timothy.—No. 1, $39@40; No. 2, $36@38; No. 3, $31@33; Shipping, $28@29; No grade, $18@25. Clover, Mixed—Fancy, $35@37; No. 1, $32@34; No. 2, $27@29. Straw.—Large Bales, No. 1 rye, $26; No. 1 oat, $20.

Wheat.—No. 2, red, c. i. f., $2.38; No. 2, hard winter, $2.38.

Corn.—No. 2, yellow, $1.27.

Oats.—No. 2 white, 67c; No. 3 white, 66c; rye, c. i. f., $1.91; barley, feeding, $1.14@1.15.

PITTSBURGH HAY AND GRAIN

—October 2, 1920

Hay receipts continue liberal while the demand is only nominal. All buyers holding off anticipating lower prices. Would advise shippers to go as slow as possible under present conditions. The tendency of everything seems to be lower.

Straw receipts are very meagre and below the demand. This commodity is an exception. All arrivals being disposed of at top values and market looks very firm.

Ear Corn, Shelled Corn and Oat receipts are light, altho they are fully sufficient to meet the demand. Prices look lower.

The following prices can be realized:

No. 1 Timothy, $32.50@33; Standard Timothy, $30@30.50; No. 2 Standard Timothy, $28@29; No. 3 Timothy, $24@25; No. 1 Light Mixed, $29@30; No. 1 Clover Mixed, $29@30; No. 1 Oat Straw, $17@17.50; No. 2, Oat Straw, $16.50@17; No. 1 Wheat Straw, $16.50@17; No. 2 Wheat Sraw, $16@16.50; No. 1 Rye Straw, $17@17.50; No. 2 Rye Straw, $16.50@17; New No. 2 White Oats, 62@63c; New No. 3 White Oats, 58@59c; No. 2 Yellow Ear Corn, $1.25@1.27; No. 2 Yellow Shell Corn, $1.30@1.32.

PHILADELPHIA DAIRY MARKET

—October 2, 1920

Butter.—Receipts, 2,819 tubs. The market was virtually neglected as usual on Saturday, but prices were firmly maintained. Fresh, solid-packed creamery, high-scoring goods, 63@65c, the latter for jobbing sales; extra, 62c; do., extra firsts, 59@61c; firsts, 52@57c; seconds, 47@51c; sweet creamery, choice to fancy, 64@66c; fair to good, 53@63c; ladle-packed, as to quality, 42@45c; packing stock, 338@41c; fancy brands of nearby prints were jobbing at 70@73c; good to choice, 62@69c; fair, 59@61c.

Cheese.—Steady but quiet. We quote: New York whole milk, current make, fancy flats, 29¼@29¾c; common to fair, 25@29c; Longhorns, 29½@30c; single Daisies, 29½@30c; jobbing sales of fancy goods, 32@33c.

INTERSTATE MILK PRICES

—October 2, 1920

Philadelphia milk prices in effect for October are as follows: For three per cent milk, $4.20 per cwt., or basic quantity price per qt. of 9.1c. For 3.5 percent milk, $4.40 per cwt. or basic quantity price of 9.6c per qt. For four percent milk, $4.60 per cwt., basic quantity price of 10c per qt. The price for surplus milk 3 percent, $2.41 cwt.; 3.5 percent, $2.61 cwt.; 4.0 percent, $2.81 cwt., at receiving stations. When milk is not tested the price f. o. b., Philadelphia is to be 10c per qt.

NEW YORK MILK MARKET

—October 4, 1920

Warm weather early in the week helped the retail demand considerably and surplus was almost wiped out. Later business was not so brisk and market very flush. The October price for 3 percent milk in 200 mile zone was finally fixed at $3.65 per 100 lbs., the same as the September rate; add 4c per 100 lbs., for each additional one-tenth of one percent butterfat.

Receipts of milk and cream in 40-quart cans for the week ending October 2nd, 1920, were as follows:

Railroad	Milk	Cream
Erie	42,000	3,533
Susquehanna	8,830	136
West Shore	14,892	1,910
Lackawanna	57,525	2,694
N. Y. Central (long haul)	190,067	3,332
Ontario	47,826	1,908
Lehigh Valley	56,532	801
New Haven	7,000	75
Pennsylvania	12,514	456
Other Sources	6,300	250
TOTALS	452,486	15,100
Same week last year	392,510	15,526

TOBACCO MARKET

—October 2, 1920

Information from Ohio and Wisconsin indicates that an excellent crop of tobacco has been grown and successfully housed. There was some loss from time to time by hail storms, etc., but the total damage has was less than usual. The acreage have has been reduced by some 20 percent as compared with last season but the unusual luxuriance of the crop will make amends in part at least for this shortage. But few sales have been reported and there were so widely separated both in point of location and in valuation as to afford but little information the extreme range of price, it was reported, was from $16 to $40 per cwt. In Wisconsin there was yet a decided lack of agreement between sellers and buyers the former holding for about $30 and 10 percent and the latter contending for lower valuations. The recent general decline in valuation of all commodities will probably favor the position of buyers. In Ohio no sales of the new crop have been reported and buyers refused to even give an estimate of prospective prices. It is considered probable that early transactions will be on a basis of about $20 per cwt., but others would put the valuation as low as $16.

In Pennsylvania there was considerable anxiety on account of impending frost but as usual the damage was less than feared and was indeed trivial. Of course there was general hustle to get under cover and in some instances seven days a week were employed. It is at such times that extra labor commands a price not always in proportion to financial outcome of producer, but there seems to be no logic always around. Those thus caught may well plan to have work better in hand when the emergency comes as this may enable them to get under cover without extra help.

Farm Products Prices and Prospects

THE FEDERAL RESERVE DEFLATION POLICY

Theoretically there may be no objection to the declaration of Federal Reserve officials that they will not favor loans to agricultural producers who wish to hold their products from the market in order to obtain prices more nearly in line with cost of production. The consumers of any commodity are always more numerous than the producers thereof so that any public pronouncement which favors the former will attract wider approbation than if it benefits the producer. These officials are the servants of the majority. Nevertheless the application of their policy may not favor the consumer so much in the long run if it goes to the point of discouraging production.

It is well recognized that farmers usually sell the bulk of their products within a short time after harvest. This is said to be one reason why the farmer is at the mercy of the grain speculator. The policy of the board compels the farmer to continue that habit unless he has sufficient means of his own to avoid it. Furthermore, the speculator who buys the grain under the present scheme has to have money to buy with. The professional speculator has had his line of credit curtailed so that there is less buying power than usual. Even tho the manufacturer whose chief justification for buying farm products in large volume during the fall of the year was that he could buy cheaper then than later has been discouraged from making purchases. The result of compelling sales and at the same time restraining buyers has brought about the most rapid sort of deflation in prices upon a number of farms commodities.

Furthermore it is not apparent that there is a real shortage of money just now. French Government Bonds (8 percent) to the extent of $100,000,000 were oversubscribed within an hour after the books were opened. A similar loan of $20,000,000 to Norway was far oversubscribed within a part of a day. The Bell Telephone Company sold $25,000,000 of 7 percent bonds in a jiffy and a leading cotton manufacturer quickly sold $10,000,000 in bonds. Swift & Company sold $40,000,000 in five-year notes and the Goodyear Tire Company easily closed $25,000,000 loan. Evidently, the country's capacity to absorb new financing is large, including loans abroad, altho some of our primary producers are being compelled to liquidate rather than continue in production.

HOG PRICES SLIDE TOWARD WINTER BASIS

The expected increase in hog supply made itself manifest to the extent of about 20 percent the past week and a decline of $1 to $1.50 resulted. That it is the start of the fall run is indicated by the big percentage of light hogs and pigs, the latter losing $3 in value. Eastern points have been well supplied with new crop hogs restraining the operations of shippers in western markets.

The break of $2 or more from the recent high point has been sharper than the increase in supply alone would justify especially since wholesale prices upon fresh pork remained practically unchanged during the past two weeks while erratic prices changes have been taking place in the hog market. Declines in cured pork products and in numerous other commodities, however, have worked against sellers of hogs. Increasing numbers of light hogs will soon destroy the advantage they have recently had in the market. Prices are certain to work lower during the next two or three months altho receipts will run lighter than last year when the hog population was only slightly below the peak. The huge corn crop must be fed in large part and a profitable feeding ratio for the hogs marketed during the coming winter and spring is probable, which will tempt growers to put on weight.

BIG HORSES DECLINE SLIGHTLY

Dependence of the horse trade upon business conditions has been demonstrated by the events of the past few weeks. Slumps in cotton, tobacco and other southern products have brought the trade in southern chunks to a standstill and mule values have been affected also. Buying for Maine potato fields is practically over for the season, removing the strongest prop from under good big horses which have declined slightly in the last week or ten days. Slackening of industries and building operations, and the absence of coal companies which have no coal to haul has affected the market for rugged workers. No improvement is expected this fall unless the business outlook changes.

Chicago.—Good and choice drafters, $225@325; common and medium drafters, $175@225; expressers, $125@185; farm mares, $115@150.

St. Louis.—Good drafters, $200@225; good eastern chunks, $125@140; choice southerns, $110@150; medium and good southerners $50@80; Mules: 16 to 17 hands, good, bulk, $240@280; 15 to 15½ hands, bulk, $140@195; 15 hands, bulk, $110@140; 14 to 14½ hands, bulk, $80@100; 13½ hands, bulk, $80@100; 13½ hands, bulk, $25@45.

Buffalo.—Good drafters, $250@360; wagon horses, $125@200.

PROVISIONS REFLECT DECLINES IN CORN

Chicago's lard supply decreased about 30 percent during September and good sized decreases were made presumably at other storage centers. The movement of hog products abroad is above the prewar average and domestic consumption has shown the usual early fall expansion. There will be a good sized carry over of lard when the new packing season starts on November 1, but the cut meat stocks are not at all burdensome. Foreign exchange is a tremendous handicap to foreign buying otherwise our surplus would move abroad quickly.

WOOL SITUATION UNCHANGED

Wool buyers continue to wait for a lower price level which they expect to see established in the Australian auctions which have just begun. August consumption of wool was only 38,000,000 pounds compared with a normal average of about 55 or 60 million pounds. Recent London sales were closed a week earlier than originally planned because of the low prices offered and the necessity of withdrawing 60 to 70 percent of the offerings. Recent declines in textiles have unsettled the market for goods, buyers hoping to buy cheaper later on.

Boston quotes prices, largely nominal, as follows:

Ohio and Pennsylvania fleeces, Delaine, unwashed, 60@65c; fine unwashed, 52@57c; ½ blood combing, 57@58c; ⅜ blood combing, 43@45c; Michigan and New York fleeces, fine unwashed, 50@52c; Delaine unwashed, 60c ½ blood unwashed, 55@57c; Wisconsin, Missouri and average New England, ½ blood, 55@60c; ⅜ blood, 42@43c; ¼ blood, 39@40c; Kentucky, West Virginia and similar, ⅜ blood unwashed, 43@45c; ¼ blood unwashed, 43@44c.

SHARP DECLINE IN MILL FEEDS

Mill feeds took another hunt for bottom levels the past week. Weakness in wheat and feed grains was a factor and buyers continue to purchase sparingly. October nearly always develops a sag in the feed-stuffs market after which there is an advance as winter demand develops. Latest quotations per ton in carlots in 100 lb. bas are as follows:

Chicago—Bran, $45; standard middlings, $53; flour middlings, $62; cottonseed meal, 41 percent, $61; cottonseed meal, 36 percent, $58; gluten feed, $56; hominy feed, $58; old process oil meal, $66; tankage, $115.

LOW PRICES FOR SEEDS

Prices for timothy and clover seed fluctuated the past week with the grains closing near the bottom for the season. As long as the present desire to avoid owning anything lest it decline in value continues prices on seeds will not recover much lost ground. Quotations at the week's close were as follows:

Toledo—per bushel; prime red clover, $14.25; prime timothy $3.25.

OATS ARE DEFLATED

Cash oats are down to a point where not much above 40 to 45 cents can be obtained by farmers depending on the section of the country. This is not only below cost of production but approaches the prewar level without making any allowance for the decreased purchasing power of the dollar. The crop movement presumably has passed the peak and demand is unlikely to become less than it has been during the last few weeks. No purchases for export are being made. Banks are showing greater willingness in certain quarters to loan money on oats because of their cheapness, enabling farmers to hold.

Little barley is being sold for export but the old rye surplus has been absorbed by a movement abroad of 38,000,000 bushels in the last six months.

Fruit juices are good thruout the year. Beverages, syrups, sauces gelatin, and frozen desserts may be made with their aid. Cornell has a bulletin on fruit juices; the college of agriculture at Ithaca will send it on request.

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PAY POSTMAN WHEN HE BRINGS THE SHOES
A GREAT SHOE FOR THE MONEY
The men and boys of your family will find
DI-TOK STANDARD SCOUT SHOES
look better and wear longer than shoes that have cost twice the money. Wide and roomy, bull-dog toe, flexible and easy to the feet. Made of durable, waterproof mahogany leather uppers, genuine leather soles and heels, reinforced with extra stitching and full run of lock nails. Foot protection for all seasons. Men's sizes 6 to 11, $3. Boys 2½ to 5½, $2.50. YOU BUY DIRECT. We distribute for the factory, eliminate all unnecessary profits and expenses so you can buy our standard shoes at real money saving prices—delivered to your own door.
UNQUESTIONABLY GUARANTEED
WE POSITIVELY REFUND YOUR MONEY IF NOT SATISFIED
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I will pay postman on arrival. Size ....
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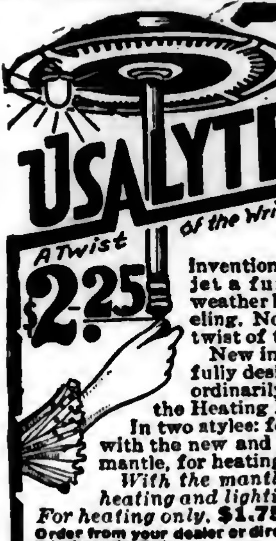

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Quality Service Satisfaction
Always look for our trade mark (as shown below) on the bag. It means protection to you. Hundreds of farmers in the East have come to recognize it as the mark of honest, square fertilizer goods and methods.
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100 Acres $2900 With 3 Horses, 10 Cattle, Tools
Owner called away, leaves fully equipped money-making farm great bargain; on improved road, near village; machine-worked fields; brook-watered pasture; 100 apple trees; 400 sugar maples; 10-room house, running water; barn, poultry houses, other buildings; if taken now you get horses, cattle, pigs, poultry, wagons, machinery, tools; all for $2900, part cash, balance easy terms. Details this and equipped 110 acre farm only $800 cash required page 11 Strout's Big New Illustrated Catalog Farm Bargains 33 States. Copy free. STROUT FARM AGENCY 1022 B E Land Title Bldg., Phila.

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IS the land you have bought and paid for all *yours* to plant crops on and reap the harvest or *does some of it belong to the stumps?*

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Red Cross 20% Dynamite

Clearing land by means of Du Pont Explosives has become the standard method in this part of the country because it is very simple and quick, requires the smallest amount of labor and is, therefore, very cheap.

Every stump on your land is costing you money—an undesirable tenant that you want to get rid of.

This year is the greatest for land clearing this state has ever known. Get after your stumps NOW. Have more land ready for crops next year. Your dealer will supply you with Du Pont Explosives and Blasting Accessories.

Write us for Farmers' Handbook of Explosives which has full details on "Farming with Dynamite." It's free.

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This shoe is for all seasons. It will stand up and keep its shape, no matter how toughly treated, and will always remain comfortable. Its an unbeatable work shoe.

Made of the toughest soft leather with solid, heaviest soles and heels, guaranteed good all the way through.

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REAL COMFORT FOR EVERY HOME

Sanitary, odorless, convenient. Installed in 15 minutes in any part of house. No plumbing, drainage, sewerage. You owe it to your family, old folks and children to install one before winter.

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HIGH-GRADE NEW YORK STABLE MANURE
Carload shipments on Pennsylvania and Reading Railroads.

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PHILADELPHIA OFFICE, 1918 MARKET STREET

CONCRETE ON THE FARM

Concrete construction on the farm seems less of a problem than elsewhere, as the foundation stone may be had from the farm, which saves long hauls, as well as money. A successful job, in concrete, is more economical than if done with lumber. We all know that such as outside steps, etc., put up now, will in a few years have to be rebuilt but, if made of concrete, are there to stay and the first expense is the only one both in labor and material.

Now, the writer will try to tell how a very satisfactory, as well as pretty set of five steps of concrete, were built at the back of his dwelling.

First, the step form was made of strong old lumber to hold the concrete in shape. After placing it to see where the steps extended so as to dig the foundation, the form was removed and foundation dug 18 inches deep, then filled with cobblestones to within about 6 inches of the surface, then wet and tamped firmly. Then they mixed some concrete, in the proportion of 3 buckets of small stone, 3 of very clean sand and 1 of good cement and put in on top of the stone foundation, filling to within 2 inches of the top of the step and tamped well. They then mixed some sand and cement 3 parts sand to 1 of cement and placed on top 2 inches deep. Either trowel the surface off smooth or have a board float and float off the surface. We floated ours off first then trowled it.

Potatoes Grown Under Straw

If laying a concrete floor, in a [illegible], if the ground is hard and dry, digging a foundation is unnecessary and not as good as to lay the mortar right on the ground. Mix part of good Portland cement and 3 parts of sand and fine gravel mixed. If gravel cannot be had, sand alone will have to be used, altho it is better mixed with gravel for with little gravel stones all thru the mortar, the surface can never wear smooth.

But, remember, clean sharp sand and gravel must be used for a water-tight floor and it will not do to have the least soil or clay in the mortar, and the cement, if caked hard in the bag, should not be used.

Lay the mortar 3 inches deep where the horses or cows stand, but 2 inches is enough in the feeding alley and bottom of mangers. Better lay mortar all at one time, not in two coats. If using part gravel and float off the surface, not trowel it smooth, it will be rough enough without corrugating the top for a good floor. See that the mixing is thoroly done dry as well as when wet. Mortar should be laid as fast as mixed. Keep sun and wind from drying it too fast.—M. A. Croll, Del. Co., Pa.

GROWING POTATOES UNDER STRAW

Last April after planting a part of my garden I had a plot left 15 feet long, 15 feet wide at one end, and 9 feet wide at the other. I took potatoes about the size of hen eggs, split them once and planted them one inch deep and twelve inches apart each way then I covered them about one foot deep with the stray I had mulched our strawberries with last winter. When the potatoes were 6 or 8 inches high I put 50 pounds of 2-10-4 feritilizer over the plot. From then on I did no more until September 10 when I removed the potato tops and raked the ground. Then I had this picture taken before I picked up the potatoes which weighed 98 pounds and were nice and clean.—J. O. W., Huntingdon Co., Pa.

SELECT SEED CORN IN THE FIELD NOW

"No crop is more easily and rapidly improved by proper selection than corn, and no work on the farm will come so near producing something for nothing as time intelligently spent in improving this crop," says Professor F. D. Gardner, of the department of agronomy in the Pennsylvania State College of Agriculture.

Corn for seeding the next year's crop should be selected right in the field before the ear is removed from the plant so that both may be considered in the process. Good plants should be of moderate height. Short joints are preferable to long ones, for each bears a leaf. The leaves are the most palatable, digestible and nutritious part of the forage. The plants should be free from smut, rust and other diseases.

The ears should be attached to the stalk at a height of about four feet and by a shank of moderate length and thickness. The husks should be moderate in amount and sufficiently long to cover the tip of the ear. A good seed ear should be eight to ten inches long (for a medium maturing variety). The form of the ear should be cylindrical, or be slightly tapering from butt to tip. The tip end butt should be well filled with kernels and the rows, 16 to 20 in number, should be straight with kernels of regular and uniform shape.

The seed corn should be well cared for by storing in a dry and well ventilated room out of the reach of rats and mice. After being thoroly dried, corn will stand a low temperature without injury, but if not well dried a temperature slightly below freezing will injure or destroy its germination. Be sure that corn selected is adapted to the locality, especially with reference to its time of maturity.

The best way to make poor land pay a profit is to grow timber. It's slow but sure.

Broken eggs cannot be mended, said Abraham Lincoln. Neither can a weed-grown garden be expected to fill the cellar with vegetables.

Better select for seed some sweet corn from your own garden. Mark a few of the best ears and harvest them after they have fully matured.

If you've got a grudge against the grubs and insects that worry your garden plan to spade or plow the land this fall. The bugs don't like the disturbance.

COOPERATIVE MARKETING IN CALIFORNIA

(Continued from Page 15).

agreed that this is an absolute essential.

2. The associations have an absolute binding contract with every producer who belongs, requiring him to market all his produce thru the association over a period of years. A California cooperative organization would no more think of starting now without this provision than it would of leaving its safe unlocked at night. The wisdom of years of experience in cooperation in California has burned the necessity of this provision into the very soul of cooperative enterprises.

3. Crops are handled on the pool basis, thereby giving every producer the same price for the same quality product, no matter when sold. This rule, with little variation, is in effect in practically every cooperative organization in California. It is the basis of true cooperation, and the wisdom and fairness of this provision have been proven thru the years.

4. Organizations are without capital stock and operate on the non-profit plan. Most of the California cooperative associations are operating under the non-profit plan with no capital stock, and the others are rapidly changing to this plan or are endeavoring to do so.

In subsequent articles, I will discuss these principles in detail, and in telling how they were arrived at, will tell the story of the development of certain of the important cooperative enterprises in California.

DIFFERENTIAL GREASE FOR PLOWSHARES

The used grease from automobile differentials makes a pretty good grease for the farm tools that have to scour for good work. I have used cylinder oil for this. It does good work for a few days or sometimes a week or so but when it comes to leaving a machine in the weather or inside for a month or so it seems to lose its greasiness.

Differential grease is more solid and lasts better. It will stand lots of weather and when a shovel or plow is inside for the winter it does the work about as well as anything.

Some protection ought to be given to machinery of the scouring kinds whether it is inside or not. Especially should it be given protection if left outside.

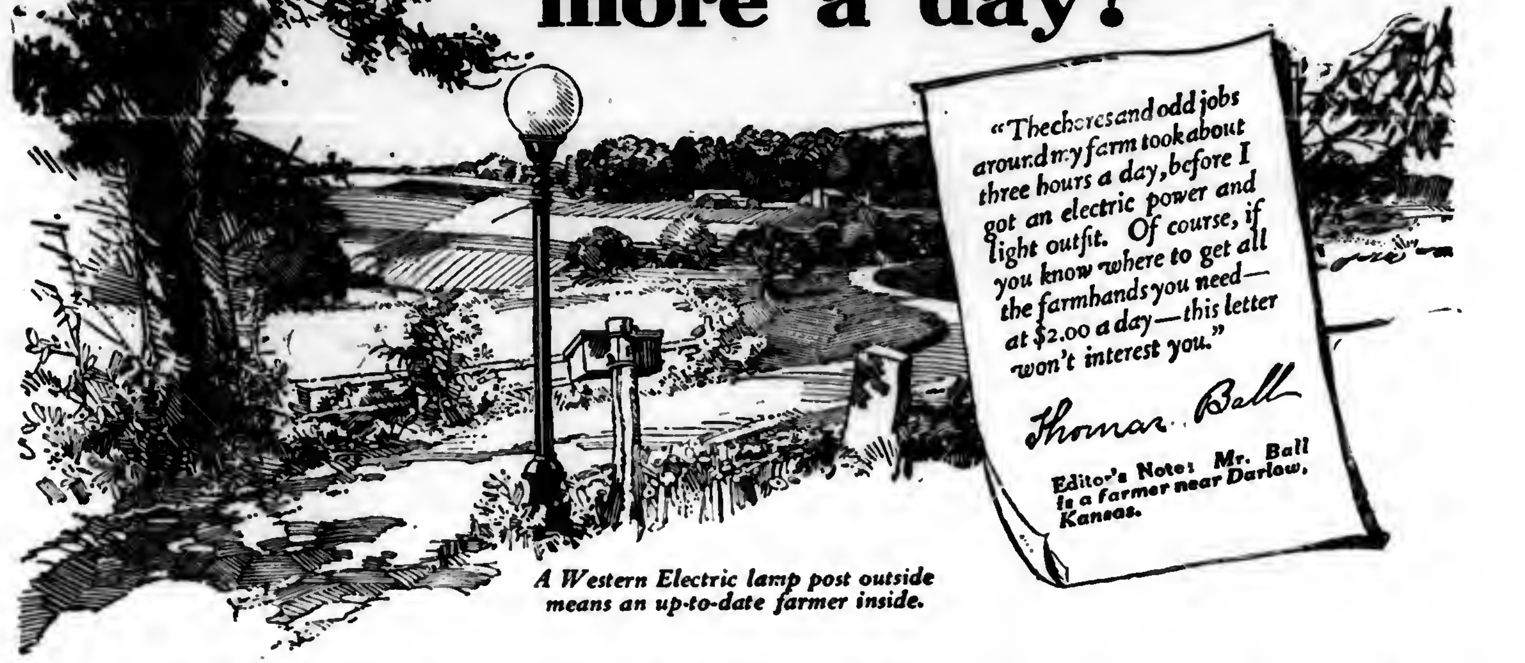
I use the grease for this work with a brush. Keeping some in a quart can and a brush in it all the time makes it about as handy as any way I've found. When grease is easy to get at and easy to apply it is far more apt to be put on.—Earl Rogers, Ohio.

BEES AID SELF-SUPPORT

A farmer of Perry County writes that his seventeen-year-old daughter hived five swarms of bees in 1919. These hives produced 200 pounds of comb honey when sugar could not be secured and it was used as a sweetener in the home. He claims that it took very little time to hive and care for the bees and that every farmer would do well to keep a few bees as an aid to self-support.

He further adds that farmers in his vicinity have recently subscribed $40,000 for a cooperative milk condensary.

Few pictures, well chosen, are better than a wall full.



Could you use 3 hours more a day?

"The chores and odd jobs around my farm took about three hours a day, before I got an electric power and light outfit. Of course, if you know where to get all the farmhands you need—at $2.00 a day—this letter won't interest you."

Thomas Ball

Editor's Note: Mr. Ball is a farmer near Darlow, Kansas.

A Western Electric lamp post outside means an up-to-date farmer inside.

"AS a rule we farmers don't give much thought to the value of our time. But we suddenly realize that time is worth money, when milking the cows or mixing the feed keeps us from bigger jobs, out in the fields.

"Last year I made up my mind that I would look for a farm plant with power enough to do real work. The one I picked was the Western Electric Power and Light Outfit, and please notice that putting the word Power first in the name describes the outfit very well. It is powerful. But I'm not going to praise it up to the skies. I just want to describe this outfit and the work it is doing for me, and let you judge whether it would suit your needs too.

The battery lasts longer

"It is the 'tapering charge' that makes the Western Electric battery last so long. The charge doesn't strain the batteries, because as they fill, the current gradually slacks up by itself. These batteries are powerful too. They can run my portable motor for hours and hours on a single charge. Or they can operate ten electric lamps for thirteen and a half hours.

"Then there is the generator, built for endurance and hard work. In fact, it will run such a combination as an electric iron, twenty lamps and a one-sixth horsepower motor just as long as you keep it going.

"With the batteries and the generator working together, you just add the capacity of both. That explains how I can use electricity to milk the cows, separate the cream, churn the butter, turn the grindstone and pump water.

The powerful engine is a big help

"The Western Electric Outfit has an extra size engine, with a pulley all ready to be hitched up to a lot of the machinery I used to turn by hand. So taken all in all, you can see how I save at least three hours a day for work in the field. And in these times when farm-hands are so few and far between, it is mighty important to have this dependable help that my electric power outfit furnishes."

Just connect this portable motor to any electric lamp socket

The Western Electric Vacuum Sweeper cleans your house quickly and easily.

A farmhand you can always depend on—Western Electric Power and Light

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Farm Light & Power Co., Mount Union, Pa.
J. T. Borton, Glassboro, N. J.
Electric Construction Co., Baltimore, Md.
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For territory still available write to Western Electric Co., NewYrok

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CHESTER WHITE PIGS.—A fine lot now ready to ship, either singly or in pairs. R. L. MUNCE. Canonsburg, Pa.

REG. DUROC JERSEY Pigs, prize winning stock. Orion Cherry King lines. ROLAND G. & KENNETH E. LAY, NEWVILLE, PA.

Big Type Poland Chinas All ages. Write your wants. KEYSOR & CLELAND, GREENWICH, OHIO

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REG. O. I. C'S, all ages. Open and bred gilts at prices to move them. Black Diamond Minorca Farm, Mt. Bethel, Pa.

REG. BIG TYPE POLAND CHINA pigs, $15.00 each, first of November delivery. C. E. SECHLER. MARKLETON, PA.

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Son and grandson of famous stallion "DRAGON" Proved very reasonable.
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Fox, Coon, Skunk and Rabbit Hounds; also puppies and started dogs. Buy now and know your dog when the season opens. Stamp for reply.
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Broken Hounds for Sale. Highly trained dogs of all kinds. Coon, Skunk, Rabbit, Airdales, Pointers and Setters. Also Puppies of all kinds. GLEN ROCK KENNELS. GLEN ROCK PA

CASH PAID
for well trained rabbit, coon and bird dogs; must not be gun, nor auto shy; and be good all day hunters. Reference, First National Bank, New Kensington, Pa.
J. S. McKEAN & SONS, Ltd., New Kensington, Pa.

English Pointer Puppies for sale, 3 months old. 1 male $15; 1 females $10 each. GLEN ROCK KENNELS. GLEN ROCK, PA.

SHIP US your cultivated chestnuts, fancy eggs, calves and poultry. WM. H. COHEN & CO., 232 WASHINGTON ST., NEW YORK CITY.

REG. HAMPSHIRE DOWN SHEEP. Ewe and ram lambs, best of blood. Priced right. C. E. SECHLER. MARKLETON, PA

Chester Whites and HAMPSHIRE SHEEP. Write your wants. We can please you. TWIN BROOK FARM. Newville, Pa

Facts in BLACK & WHITE

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Exhaustive experiments by the University of Missouri, show that the natural yellow coloring of cream and butter is derived from Carotin, a yellow pigment found in fresh green feeds. For some unexplained reason, some breeds of cows make more use of Carotin than do others when making their milk, but the butter maker who adds a vegetable coloring matter to butter is only doing what the cow would do, if she had the feeds rich in Carotin. High color in cream does not denote richness in butterfat. Holstein cows' milk is naturally light colored, but rich in body and tissue building solids and in vitality; and Holstein cows are the most economical producers of milk and butter, while their yield is more constant than that of any other dairy breed.

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Box M 58 Peterboro, N. H.

STEVENS HOLSTEIN FARM

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PAUL H. STEVENS, Prop.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale.
MILLARD E. BASEHOAR, Littlestown, Pa.

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NELSON'S BERKSHIRES

We offer on easy payment plan young gilts and boars. This is a chance for you to start a herd.
W. D. NELSON, JR., Marshallton, Del.

VIEWMONT FARM, [illegible] Pa. offers choice O. I. C. 150 to 175 lb. April and May pigs [illegible] sires and dams out of National Grand Champion boars. Reg. free. Shipped C. O. D.

Large Type Reg. Berkshires of all ages for sale. Select a breeder from a large litter. Pay when you see stock. No cash in advance.
DAVID WIANT, HUNTINGTON MILLS, PA.

REG. DUROCS Large size, heavy bone, best blood lines, prices reduced for fall. Satisfaction guaranteed.
JOHN W. COX & SON, New Wilmington, Pa.

Reg. Berskshires with size and quality; long bodies, good in back and hams. Spring pigs and bred sows.
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Special Sale REGISTERED DUROC SOWS bred for Summer farrow, $65.00 each, registered and express paid.
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O. I. C.'s 2 registered boars, born May 30, 1920. Register numbers 94680 [illegible]
HOWARD B. BINKLEY, SAFE HARBOR, PA.

Reg. O. I. C.'s Booking orders for early Sept. pigs. Prices reasonable.
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CHESTER WHITES For Sale. Service boars and young pigs, all ages.
ALLAN R. MORTON, ASHVILLE, N. Y.

REG. LARGE ENGLISH YORKSHIRES. Short nose, [illegible] and quick [illegible] type. Fall pigs for sale. J. Homer Reams, Luthersburg, Pa.

REG. O. I. C. PIGS, Aug. 1st farrow. Quality guaranteed. Two gilts 7 months old.
L. O. LAUSHEY, SMOKETOWN, PA.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, Center Valley, Pa.

O. I. C. Males 2 to 4 months old. Satisfaction guaranteed.
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Reg. Duroc Boars [illegible] Wonder, of [illegible] breeding.
E. ANDREWS, MILLERSTOWN, PA. R. 1.

BERKSHIRES that make satisfied customers. The Barnes Purebred Stock [illegible] Grove City, Pa

LIVE STOCK

CATTLE FEEDERS

By W. H. TOMHAVE

The feeding of beef cattle during the winter has become a prominent line of work on Eastern farms. While there always have been certain sections, such as Lancaster County, Pennsylvania where a large number of cattle have been fed annually, other sections where corn can be successfully grown have become prominent feeding centers. There is practically no grazing land in most of these sections which makes it necessary to buy the feeding cattle on the market in the fall and sell them out of the feed lot the next spring. This practice means that there is a greater risk in cattle feeding for such farmers than if they could develop their own feeders and save the expense of handling thru the feeder market, as well as paying the profit that should go to the breeder of such cattle.

There is more or less speculation in cattle feeding because of uncertain market conditions such as are frequently encountered. There are years where money is lost in cattle feeding, but when taken thru a series of years it is an enterprise that will pay if properly conducted.

In order to make it a paying business it should be adopted as a part of the business of the farm and no attempt made to "hit" only the good years. The man who is constantly trying to hit only the good years, as a rule, is a failure in the cattle feeding game. He is not only a failure, but is the cause of making cattle feeding more uncertain for the regular feeder. The man who is "in and out" is the trouble maker. Such men usually plan to feed cattle following a successful year of the regular feeder. By following such practices of spasmotic feeding they come on the market in the fall eager to buy cattle and the result is an increase in the price of feeding cattle because of the strong demand. Frequently they overload their feedlots, and the result is that the cattle have to be marketed before they are ready and when such is the case it is done at a loss. If there is a break in the cattle market during the winter they become scared and market their cattle and by such practice totally demoralize the market that might strengthen if not overloaded at such times.

The successful feeder is the man who feeds a certain number of cattle every year. He takes his poor years with his good years and finds that during a long period of time he will average a substantial profit from his business. He places his crops, labor, buildings and equipment necessary so that he can handle the same number of cattle during about the same time each year. He can not afford to let his plant lie idle every other year. Such practice would result in greater depreciation in his feeding plant and completely upset his work in crop production. The successful cattle feeders buys his cattle with care and judgment. He puts in as many cattle as he can take care of with his supply of farm grain feed and such protein feed as he may buy. He makes the best possible use of his labor during the time when farm work is [illegible] He avoids hauling farm crops, especially roughage, to markets and finds that by marketing the crops thru cattle the fertility of the soil is enriched from year to year. He studies modern methods of feeding and soon learns to improve his own methods so that as time goes on he becomes efficient as in any other branch of live stock production or farming. The right practice in cattle feeding will result in a successful enterprise, while occasional feeding or watching for the "good years" will result in a failure.

FATTENING LAMBS ON FORAGE

Lambs must be accustomed gradually to rich green feed like rape, soybeans, or cowpeas. The method commonly used is to put the lambs on a comparatively dry timothy or blue grass pasture upon arrival at the farm. Here they are allowed to rest and fill up on grass for a couple of days. An abundance of good clean drinking water should be provided at all times. After a day or two the lambs are turned into the corn field for about an hour, following their morning fill of grass. They are then returned to the bluegrass or timothy pasture. This operation is repeated for three or four days, and the time the lambs are allowed in the corn field is increased about an hour each day.

It is not easy to drive a load or two of lambs out of a large corn field, and there is always the danger of leaving behind a few which strayed from the main flock. To avoid this trouble, fence off "sheep tight" a plot of two or three acres. In this plot grow forage to be used to accustom the lambs gradually to their regular forage in the larger field. This plan will be found very convenient.

TEST WOOL GOODS TO LEARN QUALITY

In connection with current interest in the federal honest-fabric law, which proposes that materials shall be correctly labeled as to their content, a few simple tests for wool are helpful. Good woolen fabrics should feel springy, harsh and elastic. Much of this elasticity is lost when wool is combined with much cotton or shoddy in manufacture.

Another way to test wool is to burn a sample of the material. Wool is hair and should burn as hair burns. An all woolen material leaves an oily, gummy cinder. Fabrics may also be torn or pulled apart as a test of fiber and strength. Woolen cloth tears with a dull muffled sound, but the ease with which the cloth tears depends on the weight of the yarn and the weave. If cotton and wool are woven together, the kinds of fibers can be distinguished along the tear.

Good material also depends upon length of fiber; longer fibers mean fewer ends to roughen and the surface of the material is also held into the twine of yarn more securely. One objection to shoddy is the short irregular fibers which soon fall out or wear out.

Care, thought and cleanliness are better than canning compounds to make fruit and vegetables keep. Besides, the compounds may be injurious to health.

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will clean it off without laying up the horse. No blister, no hair gone. Concentrated—only a few drops required at an application. $2.50 per bottle delivered. Describe your case for special instructions, and Book 8 R free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Painful Swellings, Enlarged Glands, Wens, Bruises, Varicose Veins; allays Pain and Inflammation. Price $1.25 a bottle at druggists or delivered. Liberal trial bottle postpaid for 10c.

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Fashion Giant and Ohio King, our 1,000 lb. boars of advanced breeding. Sows, bred pigs in pairs, not akin, out of 700 and 800 lb. sows. Address
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All ages. Bargains in bred gilts and boars of all ages. We are overstocked and the price is right.
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Cortland, N. Y.

REGISTERED DUROC-JERSEY PIGS

$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs.
C. W. Ellis, Jr., Maple Lawn Farm, Cortland, N. Y.

CRYSTAL SPRING STOCK FARM, Seelyville, Pa. Offer 20 registered Berkshire gilts of April farrow weighing 185 to 200 pounds, by Symboleer's Masterpiece, the wonder boar and son of our American Champion, Symboleer's Junior. 2 boars suitable to head the best herds anywhere.

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FOWLER'S PURE BRED HAMPSHIRES

Will please you. Best and largest herd in East.
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REG. CHESTER WHITE PIGS.

either sex. August farrow. Ready to ship.
A. F. REIMENSNYDER, MILTON, PA. R. 2.

Big Type Poland China [illegible] Sired by Chief Lad, a grandsire of [illegible] the $5,000 hog. Pairs not akin. Satisfaction guaranteed. J. S. Funston, Amberson, Pa.

GRAIN RATIONS FOR GROWING PIGS

Five different grain rations for young pigs have been worked out by the specialists in swine husbandry at the Pennsylvania State College. They are designed to meet the needs of growing pigs from before they are weaned until they weigh about 50 pounds each. The first ration is composed of 400 pounds corn meal, 300 pounds wheat middlings and 100 pounds of tankage (55 to 60 percent protein). Another mixture is similar except that in place of 300 pounds of wheat middlings it contains 150 pounds wheat middlings, 50 pounds ground oats and 100 pounds ground rye. This provides a means of using up some oats and rye the farmer may have and will save buying middlings. The third ration is composed of 400 pounds corn meal, 200 pounds wheat middlings, 75 pounds ground oats and 150 pounds oil meal. This is the only ration of the five that does not contain tankage and is given so farmers who cannot obtain tankage may make up a good mixture without it. Another ration and one that does not require any wheat middlings is made of 400 pounds corn meal, 100 pounds ground oats, 200 pounds ground rye and 100 pounds tankage. The last mixture is made of 200 pounds ground barley, 200 pounds wheat middlings, 100 pounds ground rye, 100 pounds tankage and 200 pounds of hominy. This is the only ration in which corn meal does not appear, its place being taken by ground barley and hominy.

With this assortment of feeds from which to choose, the farmer can select a good ration for his growing pigs and make use of the feeds he already has, or of those which are cheapest in his community. It will be noticed that all of these mixtures are high in protein, a substance especially needed to promote rapid growth in young animals. At this age they make their most rapid and cheapest gains, and a feeder can afford to use more expensive feeds than he can later in their lives. As the animals grow older they do better on a ration that contains a larger proportion of carbohydrates and fats.

MARES AT FOALING TIME

A year's effort may be lost by neglecting brood mares at foaling time. In view of the time which it takes to produce a foal, one can ill afford not to give the necessary attention to the animals. A little care for the first few nights will often save the entire year's work.

Mares in foal may be worked to within two or three days of foaling. Should work cease before that time, rations should be decreased materially. Rations should consist of bran, oats and other laxative foods. In foal mares should be provided with box stalls, if possible, some time before they foal. These stalls should be kept clean and properly disinfected.

As soon after birth as possible the foal's navel should be tied and disinfected with iodine or some other good disinfectant. Careful attention should be given to see that foal's digestive apparatus and kidneys are in working order within twenty-four hours after birth.

Mares, after foaling, should be given water, not too cold and not in too large quantity. The ration for two or three days should be comparatively light, and similar in nature to that fed before foaling. After normal conditions seem to have been established the ration may be increased.—Leonard F. Strickler.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Functional Spinal Disease.—Last spring I purchased a fine large horse some time later he took sick, was treated for pneumonia and had bad illness, but seemingly recovered; except he reels and sways on hind quarters and has poor use of himself. It affects him most when backing. C. N. K., Mantua, N. J.—Perhaps his back has been injured, or he may suffer from functional disease of the spinal cord or its coverings. Give one dram of ground nux vomica at dose in feed 3 times a day, also give him two drams of acetate of potash daily in the water he drinks.

Sprained Fetlock Joint.—About six weeks ago our 3-year-old filly got foot and leg over a board in stable, while struggling she evidently sprained fetlock joint. I applied liniment which seemingly had good effect, but leg remains stocked. However after a drive of 4 or 5 miles this stocking leaves. What had I better apply? A. C. R., Snow Hill, Md.—Apply bandage and leave it on for 3 hours after you have exercised her. Dissolve ¼ lb. acetate of lead in one gallon of cold water and apply to stocked parts 3 or 4 times a day. Give her a teaspoonful of acetate of potash daily, in either feed or in drinking water.

Knuckling.—I have a horse that knuckles in fore leg. What is the remedy for this ailment? F. F., Califon, N. J.—Frequently following sprain of the suspensory ligament and back tendons we have a deformity called knuckling of fetlock. By this is meant a deformity of the fetlock joint by which the natural angle is changed from that which pertains to the healthy articulation. The first pastern bone, loses its oblique direction and assumes another, which varies from the upright to the oblique, from before backward, and from above downward; in other words, forming an angle with its apex in front. Knuckling or cocked ankles is a partial dislocation of the fetlock joint, in which the relative position of the pastern bone to the cannon and coronet bones is changed, the pastern becoming more perpendicular, with the lower end of the cannon bone resting behind the center line of the large pastern, while the lower end of this bone rests behind the center line of the coronet. Young colts are quite subject to this condition, but before birth the legs were flexed; and time after birth is required for them to straighten. The ligaments, tendons and muscles seem to adapt themselves to the function of sustaining the weight of the body. As they grow old, horses with erect pasterns are likely to knuckle, especially on the hind legs. Treatment to whatever cause the knuckling may be ascribed, it is always a severe infirmity, and when it is chronic, is very often incureable. If it is caused by overworking, rest is the remedy. Careful attention to the foot and elevating the heel, slightly will help. Stimulating liniment or light blisters are proper remedies.

Reward the vegetables that behaved well this season by saving the seed for next season's planting.

SPOT FARM

Second Annual Sale
TULLY, N. Y.
Saturday, October 16, 1920 at 9 A. M.

125 Head, All to be Sold in One Day, Consisting of
50 fresh and close springer cows
20-2 yr. olds, bred to freshen during winter
15 yearlings, ready to breed
20 heifer calves, 6 to 8 months old.
15 bulls, 6 to 18 months old.

60 DAY RETEST GUARANTEED

Clothilde Barbara, 7 days 32.27 lbs. butter; 589.6 lbs. milk. Her daughter Valley View Barbara, both in calf to a 33-lb. bull, due in November.
B. K. P. Leafy Dawn, a 4 yr. old daughter of a 43 lb. cow, a full sister to a 37 lb. 4 yr. old that sold for $5500 in St. Paul sale, June, 1920; in calf to a 34 lb. bull, due at sale time.
Pietertje Urma Inka, a 4 yr. old daughter of a 31.72 lb. cow that gave 701.50 lbs. milk in 7 days; in calf to a 34 lb. bull.
E. P. C. Lilith Daisy, 30.75 lbs. butter; from a 30.51 lb. dam; due in January.
Cows with records 22 to 27 lbs. Heifer records 15 to 22. Daughters and sons of these cows in sale.

BULLS

Sir Korndyke Pet Burke, dam a 34.25 lb. 3 yr. old daughter of King of Pontiacs.
Sir Hengerveld Rag Apple Majestic, sire Majestic Rag Apple, the $30,000 bull; dam Belle De Kol Golantha Hengerveld, 30.82 lbs. butter, 631 lbs. milk, and the dam of Wandermere Belle Hengerveld, 4 yrs. old, 42.65 lbs. butter, and sold for $18,300 in June, 1919, National sale, Philadelphia, Pa.
A son of a 28 lb. cow, a 26.44 lb. 4 yr. old, sired by a 34 lb. son of King Segis.
10 other bulls, with record dams 19 to 25 lbs. of butter in 7 days.

KELLEY & HAGER Aucts.
Ward Stevens in Box.
Lunch served at noon free.

Be Sure to Attend This Sale
JOHN C. REAGAN, Prop.
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FOR SALE KING OF THE MAY
Golden Secret Bull Calf. Price $200. Sired by Brookmeads Royal Master of Riverview who is brother to the great bull, Langwater Stars and Stripes 2nd and grandson of the famous Imp. King of the May, who now has thirty A. R. daughters who exceed 622 lbs. butterfat and is also sire of Dolly Dimples May King of Langwater. Calf beautifully marked; out of a cow who is really a show cow. First check takes him. Satisfaction guaranteed or money returned.
RIVERVIEW FARMS
SWARTHMORE, (Delaware Co.) PA.
12 Miles from Phila.

MAPLE LAWN HOLSTEINS
High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.
C. W. Ellis, Jr., Maple Lawn Farms, Cortland, N. Y.

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Two excellent young bulls by 32-lb. sires. Twenty Females, calves, heifers and bred cows. Must be sold before winter.
G. SMITH & SONS, Honesdale, Pa.

BULL CALVES at BARGAIN PRICES
We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred, healthy bulls, from a clean, Tuberculin Tested Herd at reasonable prices. King of the May—Dolly Dimple—Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees.
WAWA DAIRY FARMS, 22 S. 32nd St., Phila., Pa.

WANTED A HOME
for choice registered and high grade Holstein-Friesian heifer and bull calves, $25 and up. Write us your wants. Browncroft Farms, Cortland Co. McGraw, N.Y.

FOR SALE—THREE GUERNSEY
Bull Calves, sired by Langwater Music's Dimple King, out of dams on test; one out of grand-daughter of King of the May, $50 up. A. J. Fell, Lansdale, Pa.

SUNNYBROOK GUERNSEYS
40 head, free of tuberculosis, bull calves for sale.
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Milking Shorthorns Six young males, sired by Royal Crawford, one of the Glenside herd bulls. These youngsters have good dams also show uniformity as to color and breeding. F. N. HUBBARD, TROY, PA.

We will give the use of a finely bred registered Holstein bull for 3 years to any responsible farmer. Write for our plan.
LIVESTOCK IMPROVEMENT CO., INC.,
CHARLTON, MASS.

MILKING SHORTHORNS, sons of Glenside Royal Stamp, grandsons of General Clay; also a few females. C. M. KENNEDY & SONS, ULSTER, PA.

GUERNSEYS We will sell May Rose heifer calves.
HIGHLAND VIEW FARM, Cochranville, Pa.

Reg. Holstein Bull Calves, from officially tested dams and a 30-lb. sire. Write for prices, pictures and pedigrees. Walter M. CRUTTENDEN, Forty Fort, Pa.

Ayrshire Bull Calves From high record A. R. Dams.
ROBERT TEMPLETON & SON, ULSTER, PA.

Reg. Holstein Bulls from calves to serviceable age. Herd tuberculin tested under Federal and State supervision. BONNYMEADS Farms, Harrisburg, Pa. R. 1

RUGGED PRODUCING AYRSHIRES
The herd has a strictly business atmosphere and they are bred for maximum production of milk and butterfat. If you admire the look of a producer, they will appeal to you as the premier show type. Our present offering is one choice bull calf from the best blood in the herd and backed by excellent records. Also a couple young cows and heifers. Herd tuberculin tested, no reactors. CRESTMONT FARM. 31 N. FOURTH ST., SUNBURY, PA.

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NONESUCH FERRIS WHITE LEGHORN PULLETS
300-egg strain, from trapnested hens, bred for 18 years to lay more eggs in fall and winter. Sired by sons of Prince Eglatine. April hatched $3.50 each. Impossible to breed them better. H. M. SPAHR BREEDING ESTATE, Woodsboro, Md.

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Postage paid. Leghorns, Rocks, Reds, Wyandottes, Orpingtons, Minorcas, Anconas, odds and ends. A hatch every week in October and November. Catalog free. Stamps appreciated. Nabob Hatcheries, Gambier, Ohio.

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Farm range, prize winning Buttercups. Investigate this wonderful variety. Write for circular.
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LEGHORN COCKERELS From Barron 300 egg strain. Pedigreed S. C. White Leghorn cockerels. Hatched May 3. Prompt delivery. Satisfaction guaranteed. Prices L. C. BEAM, E. Mauch Chunk, Pa.

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
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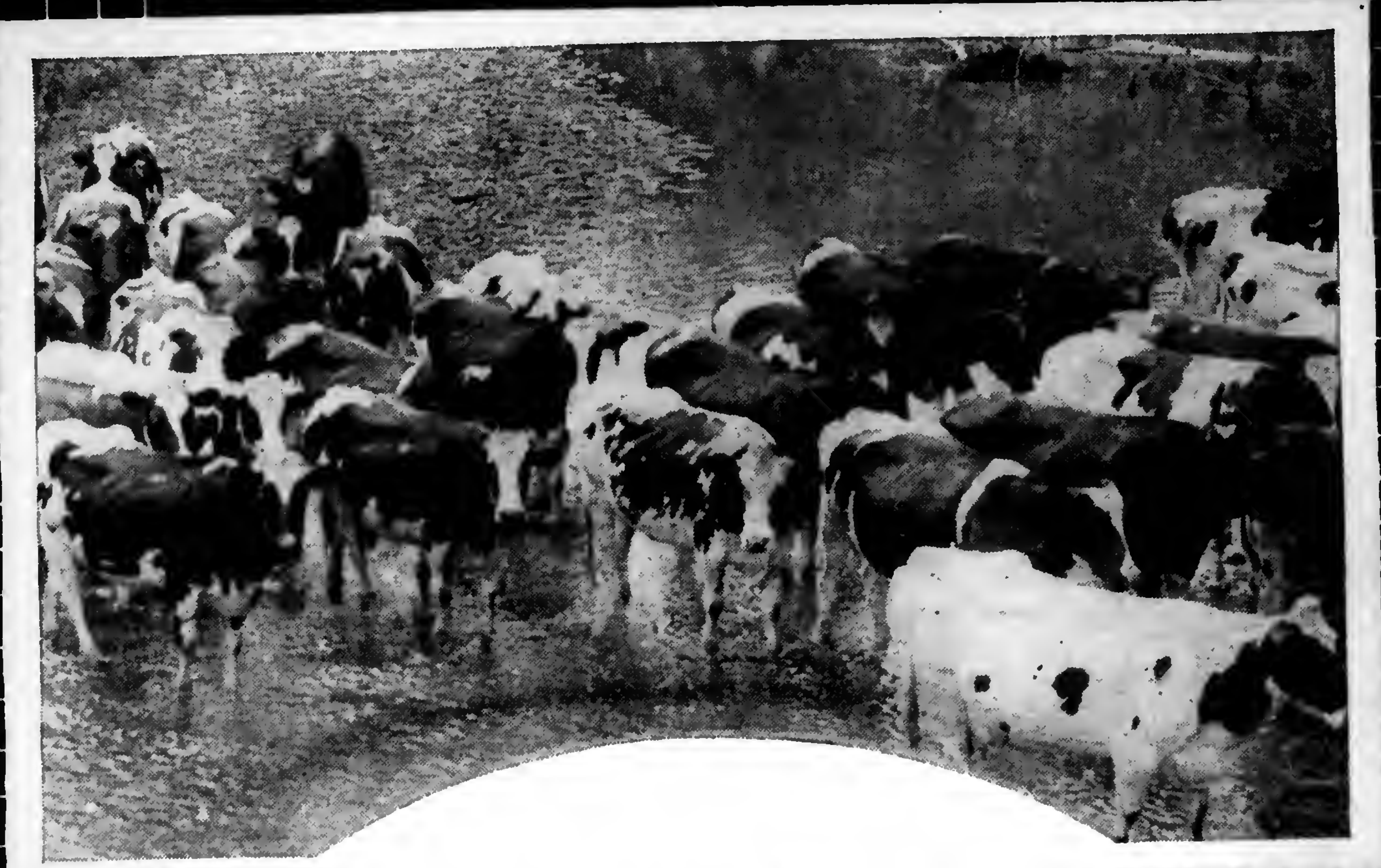

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True Value Dairy Feed

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A trial will convince you that our feed will produce more and better results than any other on the market.

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Try a sack of Ladish Quality Flour. It makes more and better loaves of bread. 1-30

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AGRICULTURE
THE KEYSTONE OF
NATIONAL PROSPERITY

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Care of Teeth as a Public Service

Pennsylvania Creates Special Department to Teach Preventive Dentistry---By Olive Cranston

. Discoveries in medical science have shown the great importance of the teeth in governing the general state of health. Until recent years, it was believed that if the teeth did not ache, that all was well. But now doctors realize that many diseases aer directly traceable to unhealthy teeth. And the main cause of "unhealthy teeth," is lack of proper cleansing.

Doctor and Nurses With Special Ambulance ready to teach value of clean teeth to children of Rural Schools

The Pennsylvania State Department of eHalth has come to realize the importance of dental service, and has created a special department of Dental Hygiene that will serve the whole state.

Dr. C. J. Hollister, a graduate of the Philadelphia Dental College, has been appointed as state supervisor of this new department. He and his corps of assistants will "bring modern dentistry to the door of the farmer."

The work is under the direct supervision of the State Health Department, and all the expenses are taken care of by that department. No charge is made to children or adults who receive the benefit of examination and treatment by Dr. Hollister's clinic.

Children Gathering Around Dental Ambulance to have their teeth Cleaned

An ambulance, equipped with all modern dental instruments is his office. He drives the car himself, and goes into all sections of the state.

The field work of this traveling clinic begun about the middle of September. There are three nurses working under Dr. Hollister's supervision. Part of the time, they are right with him, even traveling in the ambudance when the next community where work is to be done is only a short distance away. But they are qualified to make examinations themselves, and to clean the teeth. Where further work is required, they call on the local dentists. In previous work of this nature, Dr. Hollister found the local dentists very ready to cooperate because they realize the great need for dental education.

This fall's work will be directed primarily toward the children, for if the teeth are kept in good condition during childhood and adolescence, permanently good teeth are assured.

On reaching a town, Dr. Hollister goes immediately to the school authorities and explains his mission. No child is examined without the written permission of its parents or guardian. An interesting situation developed last spring in Norristown where Dr. Hollister was conducting similar work. The first day his ambulance stopped in the community, the children were a little shy, and were not sure they wanted to become a part of this new venture. Only ten children got permission the first day from their homes to have the examination made. They seemed to distrust the dentist in his long white apron, and armed with formidable tools that are part and parcel with him. In fact, many grown-ups are squeemish about dental work.

But the next day the idea took like wildfire. Many children brought the necessary permission, and Dr. Hollister was rushed to take care of even a part of them.

While, of course, he will correct defest found, the basic idea of this clinic is to show the vital importance of clean teeth. The old adage, "a clean tooth never decays," is literally true. The only exceptions are cases of malnutrition, and these cases are comparatively rare, especially in the country, where home growa food is abundant.

"Using the same dishes three times a day without washing them is no worse," says Dr. Hollister, "then failing to brush the teeth carefully after each meal." So the immediate purpose of the clinic is to conduct an educational campaign to demonstrate the absolute necessity of caring for the teeth. Less than fifteen percent of the population of Pennsylvania receive any dental attention at all, and figures gathered from experience with the army show that more than ninety percent of them have defective teeth.

Teaching Children to Use the Tooth Brush

As a result of the work that Dr. Hollister did last spring, two permanent dental clinics have been established, one in Scranton, and one in Wilkes-Barre. This is only a small beginning of the work the clinic will put into motion.

First grade children will be the youngest to come to his attention this fall. The average age of first year children is six, just when the six year molars are cut. That these teeth should be kept in good condition is of immense importance. They are the first permanent teeth, and from the keystone of the arch. Very few parents know that their children have any permanent teeth at this age. This is one reason why they are so often defective.

Only one tenth of one percent of all adults have six year molars that have not been filled, or else that do not flagrantly need filling. This condition is due to the fact that as they came in, particies of food were allowed to become lodged around them. This decayed, and in turn caused the teeth to decay.

Another vital point, which the majority of parents do not fully understand, is the function of the first teeth, and the direct influence they exert on the permanent teeth. Their purpose is two fold. The first, which is believed to be the only one, is for the child to chew its food. But the lasting purpose is to shape the jaw to accommodate properly the permanent teeth.

If these first teeth become decayed, or are pulled before nature loosens them, the permanent teeth are liable to grow in crooked, bunched, or otherwise uneven.

Dr. Hollister has always felt that the true function of a dentist should be to teach prevention of diseased teeth. And the best way to do this was thru public work. His first opportunity to carry out this plan came when he was sent to the Mexican border with our troops in 1916. While he knew that a vast number of people needed dental work done, he was amazed to discover that almost every soldier sent to the border had something radically wrong with his teeth. In many cases, the mental and physical ability of the men was seriously handicapped, because they were suffering from the results of bad teeth.

Proper cleansing of the teeth should be taught to children when they are mere tots, so that they will form the habit of brushing their teeth regularly. It is the only way to keep them healthy and free from decay. Dr. Hollister says: "If we can get the children trained into brushing their teeth regularly, the problem will be solved, for it is in childhood and adolescence that the teeth decay. If a person reaches twenty years of age without decayed teeth, it is very improbable that any trouble will occur after that."

Many dentists have great difficulty in doing work among children. But Dr. Hollister's affection for children, and his particular understanding of child psychology clears the way for him with children. They like him at first sight. His comradly manner wins their confidence. By working out a game with

(Continued on Page 23).

Soils and Fertilizers

Conducted by Dr. J. G. Lipman

Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

THE CARRYING CAPACITY OF PASTURE LAND

The cost of beef, mutton, pork and milk bears a more or less direct relation to the extent and quality of the pasture land available for their production. Where good pasture exists in abundance, animals can be grown and maintained most economically. Hence in favored localities possessing a long open season the livestock farmer can carry on his business at a lower cost of labor, concentrated feeding stuffs and housing. Much of our south and southwest is thus fortunate in being able to provide open range conditions practically thruout the entire year. Crops like velvet beans, soy beans, cow peas, the clovers, alfalfa and various grains offer an almost inexhaustible supply of nutritious animal food. But for the presence of insects and of animal parasites tending to offset the climatic advantages, this region would become, as it may yet become, the great livestock area of the United States.

But even under less favorable climatic conditions the full possibilities of our pastures are seldom realized. Even our rich river bottoms with their great reserve of fertility often fail to supply the most nutritious grasses or the maximum amount of forage. One can hardly more than speculate on the possibilities that lie in the improvement of our vast domain of pasturage by suitable methods of fertilization. Not a little food for thought is furnished, in this connection, by some very interesting experiments carried on for a number of years in several places in Great Britain, especially those conducted under the direction of Armstrong College, at Cockle Park in the County of Northumberland.

A large part of the land at Cockle Park consists of very heavy clay underlaid by a stiff, tenacious clay subsoil. One of the fields consisting of 34 acres was, prior to 1897, a poor pasture that brought in scarcely more than a nominal rental. In 1897 this field was laid out in plots of 3 1-20 acres each. The different plots were topdressed with basic slag in varying amounts, with acid phosphate in varying amounts, or with lime. One of the plots has received no fertilizer treatment since the beginning of the experiment. In addition to the phosphoric acid some of the plots have received applications of sulphate of potash, while others have received applications of sulphate of ammonia. The phosphoric acid and potash were always applied in the fall, while the active nitrogenous fertilizers, like sulphate of ammonia, were applied in the following spring. A number of sheep were kept in each lot to utilize fully all of the available forage. The animals were weighed from time to time and the weights were accurately recorded. The following results were obtained in the nine year period 1897-1905: Four tons of Lime in 1897 and again in 1903, increased live weight 12 5-9 lbs.; 10 cwt. Basic Slag in 1897 gave 79 8-9 lbs. increase; 5 cwt. Basic Slag, each in 1897 and 1900, 66 lbs.; 7½ cwt. Acid Phosphate, each in 1897 and 1900, 57 lbs.; 7½ cwt. Acid Phosphate, each in 1897 and 1900, and sulphate of potash, 65 7-9 lbs.

The figures given above represent the average annual gain of live weight due to treatment. It is evident that lime alone increased production but little. On the other hand, the phosphoric acid, whether in the form of basic slag or acid phosphate, produced a large annual increase. At the same time, the basic salg proved to be markedly superior to acid phosphate, for a single application of 10 cwt. in 1897 made possible an increase in the succeeding nine years of 719 lbs. of live weight.

With certain modifications, these treatments were continued during the period of 1906-1911; the period of 1912-1917, and the period 1918-1919. The more recent results amply confirm those already given. It is shown clearly that repeated applications of basic slag produced not only a larger quantity of forage, but also a better quality of forage. Neither potash nor nitrate of soda proved to be profitable. Curiously enough, a single application of 10 cwt. of basic slag used at the beginning of the six-year period gave better results than the same amount used in two equal portions at the beginning of the first and second three-year periods. Applications of basic slag made in midsummer gave better results than those made in early winter.

Extracting Honey at Home

The figures just given confirm the belief generally prevailing in Great Britain and on the Continent of Europe that basic slag encourages the growth of the finer, more nutritious grasses and also of white clover. The latter is nearly always more abundant on the slagged than it is on the unslagged portion of the pasture. In its turn the clover improves the pasture by fixing air nitrogen with the aid of the bacteria that live in its roots. It thus increases the supply of protein, so necessary for the formation of meat and wool. Some of the nitrogen which it obtains from the air it places at the disposal of the grasses that grow in the same pasture. The latter become, therefore, more palatable, more nutritious and better able to sustain the animals that feed upon them. In a word, the fullest strength and usefulness of our grazing lands may be effectively developed by so supplying them with phosphoric acid, and, where necessary, also with potash and lime as to favor the best growth of clover and of other legumes, the fixation of the greatest amount of air nitrogen, and the ultimate transformation of this nitrogen into flesh, muscle, wool and milk. As a natural resource of unlimited possibilities our grazing lands are deserving of more care and thought than we are now giving them. It is to be hoped that in the future we shall more than atone for having neglected them in the past.

Farm Buildings That Will Last More Than a Lifetime

EXTRACTING HONEY

We had a few bees before the war, and enjoyed the honey. However I got a little tired of the comb or wax part and decided extracted honey for hot cakes was what I wanted. An extractor was purchased and during the war and present sugar shortage I have done all my canning, preserving and jelly making with extracted honey. I even use it for baking cake and making ice cream.

One hive has grown to 15 strong colonies by watching for the swarms and capturing them and doing other work to keep the colonies strong. The apairy is run for extracted honey entirely now, the bees prefer to produce that kind, in other words they would rather fill long wide frames with comb and honey than to fill the small pound sections.

What the bees store in the large lower part is always left for them to live on during the winter, after the hive is filled then they fill a super and before the cells of the super are capped over another super is put on and if the honey flow is still good they will keep right on for the busy-ness of the bee is proverbial and they will work as long as there are flowers or blossoms from which to gather honey.

When a super is full it can be taken off, the cells uncapped and two frames at a time put in the extractor, a few turns of the handle creates enough speed to send all the honey from the cells and the combs are taken out, returned to the hive and the bees go to work and refill, thus they are saved the trouble of building the comb for the second crop.

The extracted honey can be drawn off by the bucket full. I am extracting to the tune of half a ton this season. The abundant rains have kept the honey flow good. Then too we live in a wonderful white clover section. We hardly realized how well situated we were until the bee men began to arrive here June 3rd when the New Jersey Bee Keepers Association held their summer field day demonstration at the Sunny Homecroft Apiary. There are no other bee keepers near and there is a large acreage of alsike or white clover.—Cora J. Sheppard, Cumberland Co., N. J.

CARE LENGTHENS LIFE OF TIRES

Tires will give far more satisfactory service when proper care is taken of them than when neglected and used carelessly. It should be remembered that oil is absolutely ruinous to rubber, causing it to become soft, sticky and gummy, therefore, if any oil gets on the tires be sure to remove it as soon as possible. Water is harmless to rubber, but if it gets into the fabric, under the rubber it is likely to do considerable harm, as it will rot and softens the fabric, and by the pressure and movement of the tire the damage will spread more or less, hence, all cuts and openings should be filled with some good cement at least.

Vulcanizing is the best remedy, in fact it is the only real permanent way of repairing cuts in rubber that is subject to service such as that which automobile tires have to stand. Even comparatively small cuts and openings that do not go thru to the fabric are likely to pick up stones and other foreign material and grow in extent.

When the tires are placed on the wheels be sure that both are perfectly dry, the care of the tires, like the care of other parts of the machine does not consist wholely in righting things after they have gone wrong. It begins with the way the car is driven with reference to the inherent weakness of pneumatic tires. For instance, it is carelessness to run over a heap of broken stones, or even on to single pieces of broken rock when a slight turn of the wheel will guide the car so as to avoid running on to the obstruction. Many careless drivers run over short points of a railroad switch, especially with tires insufficiently inflated, carelessness in this way is very damaging to the tires.

Allowing cars to stand for any length of time on tires not fully inflated is poor practice. In such cases jack the car up at once, in fact it is better to take the weight off the tires anyway, if it is to remain unusued for a very long time. Prevention is a better remedy in many ways in handling automobiles and is much cheaper. Subscriber, N. Y.

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Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors

A Good Appointment

THE FRIENDS of Dr. Thos. F. Hunt, formerly Dean of Pennsylvania College of Agriculture, and now holding a similar position in the University of California, will be glad to know that he has been appointed a permanent delegate from this country to the International Institute of Agriculture at Rome, Italy. The Institute was instituted largely thru the untiring efforts and sacrifies of the late David Lubin and is rendering a great service to the cause of agriculture thruout the world. Dr. Hunt has long been interested in the work of the Institute and we have no hesitancy in pronouncing the appointment a most fitting one. He is now on a sabbatical leave of absence in Europe.

Fair Sentiment Grows

WE ARE gratified at the unanimity of sentiment in favor of a Pennsylvania state fair as expressed in the letters which have come to us since the appearance of our recent editorial on the subject. Farmers and farm leaders fully appreciate the advantages resulting from a full display of a state's products and resources. The public is more definitely and intelligently impressed by what it sees than by any amount of published statements, but it has never had a chance to realize the great importance of agriculture in this state where other industries are so big and so patent to the eye. There is no other means than a well conducted state fair that will so effectively advertise farming to the public and to the farmers themselves. Let every farmer and every farmers' organization begin now to boost the project and there is no question but what it can be accomplished. Let the issue be a clear-cut demand for a purely agricultural exposition, with adequate grounds and buildings, conducted upon strictly honorable and business-like principles. Such a campaign will win without a doubt.

What The Census Shows

THE NUMBER of farms in the United States as shown by census of 1920 has increased only one and one-half per cent since 1910. During the previous decade the increase was almost eleven per cent. The surprising thing about it is that practically all the increase is found in southern states and in the far western states, while practically every big farming state from Nebraska east to Maine shows a decrease in number of farms. In our territory the decrease is as follows: Pennsylvania 17,0[illegible]; New York, 22,547; New Jersey, 3,815; Maryland, 1,015; Delaware, 708, or a total decrease of 45,114 farms in the five states during the past ten years. It is not yet shown to what extent farms have combined into larger ones, but the tendency during the past 30 years has been towards smaller rather than larger individual farms.

One encouraging feature in this situation is that in spite of the reduced number of farms in the principle farming states, production has been maintained and even increased during these years, and this in addition to the greatly lessened amount of farm labor available. It speaks well for the farmers as a class and shows that they are as progressive in adopting better methods in their business as is any other class. The immense amount of farm products produced during the past five years in the face of lessened acreage and decreased man-power is proof of the farmer's efficiency. Better stock, better seeds, better methods, the adaptation of improved machinery, and the judicious use of fertilizers and soil amendments made his work so successful, and have proven that these principles may be still further applied.

Look Out For Nullification

WHATEVER danger exists that the eighteenth amendment may be nullified lies in the possible carelessness of prohibition advocates. Because of its nearly unanimous adoption a great many people at once became complacent and discharged the subject from their minds. The National Grange Monthly is conducting a vigorous campaign to arouse people to a sense of danger that still exists in this matter and appeals to all members of the Grange to use all their efforts to prevent a nullification of the act by amendment of the Volstead act. Wayne B. Wheeler, general counsel for the Anti-Saloon League, calls attention to the fact that the nine national liquor organizations have not diminished their activities against prohibition, and that in addition there are five new national organizations in the field opposed to prohibition. The Association Opposed to Prohibition, with headquarters in New York, is said to have boasted recently that it had a billion dollars subscribed to see to it that the eighteenth amendment should not become operative. Another association in Washington has the following program: 1. To get the Volstead Act out of the law. 2. To permit every state under the concurrent clause to pass its own enforcement act.

It must be remembered that the enforcement act is the real teeth in the law. It is not probable that the amendment itself will ever be taken out of the Constitution, but it can be made non-effective by a repeal or modification of the enforcement act and this could be done by a favorable vote of a majority in Congress. Here is where the danger lies, and it is here that voters have the chance to insure themselves against a nullification of the amendment, for liberalizing the enforcement act virtually means nullification.

Hold Together

A FEW letters received at this office would indicate that the critical situation in the New York milk field because of the refusal of manufacturers to buy milk is causing some producers to criticise the management of the Dairymen's League. We feel that this is a most inopportune time to create discord in the organization. Dairymen should realize that it was by co-operation that they were able to turn a losing business into a more or less profitable one, and that without the work of the League during the past two or three years thousands of dairymen would have been forced to the wall long before this. Now develops a situation which the dairymen either singly or in co-operation cannot control and the only thing left to do is to hold together, save the organization and get as much money for their milk by pooling it as possible.

Objection is made to the agreement presented by the League for producers to sign on the ground that it is too "tight." Our observation in business matters is that it is necessary in dealing with the great majority of mankind to have papers "tight" if an agreement is to be carried out, and no exception can be made in any class. The pooling plan seems the only way out for the present in the League territory and, while it will mean lessened receipts for whole milk producers, every dairyman should loyally stand by the decision of the majority rather than wreck the organization or do anything which will tend to weaken it. We have no doubt but what the distributors and manufacturers would laugh in their sleeves if the organization should go to pieces because of dissention within its ranks. Officials as well as the lay members may make mistakes but these can be remedied later. Whatever these may be and whatever financial loss may result because of present plans the results will be far less serious than would be the disruption of the Dairymens League. It is no time to desert the ranks when they are under fire.

Our Washington Letter

In the Western New York peach belt, this fall, the crop reached maturity without the usual preparation by the railroads to handle it. Early in the shipping season there were 500 cars a day needed to move the crop, with an actual supply of less than one hundred cars. Many peaches were placed in cold storage, but there was still remaining the prospect that the growers would sustain heavy losses unless more cars were provided. The Interstate Commerce Commission was appealed to with no apparent results.

In this emergency the manager of the co-operative association which controls the marketing of the Western New York peach crop, telegraphed to the Washington office of the American Farm Bureau Federation for assistance. Gray Silver, the Washington representative, took up the matter with the Interstate Commerce Commission, and within twenty-four hours the number of available cars in the district was considerably increased and in five days the railroad was delivering enough cars to handle the crop, and the peaches were also moving out of cold storage.

A few days later a delegation of prominent Western New York fruit growers, among whom were N. R. Peet, manager of the Western New York Cooperative Fruit Growers' Association, E. C. Gillett, secretary of the New York State Horticultural Society, and C. R. White, state agent in charge of co-operative marketing extension work, came to Washington and in behalf of the fruit growers thanked Mr. Silver for his prompt and effective aid in getting action with the Interstate Commerce Commission.

* * *

While in Washington this committee of fruit growers appealed to Commissioner Kramer, in charge of Prohibition Enforcement, for a modification of his ruling on cider. According to this ruling, the manufacturer of sterilized cider is held equally responsible with the holder if, thru uncorking and exposure to air, the cider "goes wrong" in the hands of the consumer, and in most cases the holder can escape punishment by throwing the blame on the manufacturer. This is having the effect of closing down the big sterilized cider plants and reducing the demand for apples. The manufacturers want a ruling which holds them responsible for the condition of the cider only when it is in their possession.

* * *

Certain interests are conducting a propaganda to impress upon the minds of the people that there are vast quantities of wool stored not only in the United States, but in Australia, Argentina and other countries. Many such reports are appearing in the daily papers. Gray Silver, of the Farm Bureau Federation, points out that this surplus for the most part is coarse, low grade wools for which there is little demand in this country and which has accumulated because of the inability of Germany and Austria to purchase the usual amounts used by their manufacturers.

* * *

The American Farm Bureau Federation is pushing the German credit proposition. An extensive campaign will be made to bring the matter to the front in Congress. Representatives of the German government in this country have said that the great need in Germany now is for our farm products, wool, wheat, meat, and other supplies from the farms. They would buy large quantities if Congress would pass a bill giving Germany credit against the funds held here by the alien property custodian. There is a bill now pending in Congress which relates to this German credit plan; but a new bill which it is believed will better meet the requirements, will be introduced early in the next session of Congress.

* * *

The Economics Committee of the American Farm Bureau Federation is engaged in research work, studying personal credits and income tax legislation. All phases of taxation as they affect the farmers will be investigated for the purpose of formulating a programme of action which will be referred to the farmers with the expectation that after careful study it will be reflected in the farmers' demands on Congress.

* * *

Senator Oscar Underwood is authority for the statement that "no matter who is elected President, Congress will be called into extra session ate in March or early in April to revise the revenue laws and place the United States on a

peace time financial basis. Our finances must be demobilized just as our army was."

"If no tax revision legislation is undertaken in the session of Congress which will convene soon after the election this fall, it will surely come up for action when the extra session is called in March. There are powerful influences working for repeal of the excess profits tax and equally powerful interests back of the Nolan bill, which is a single land tax measure. This bill provides a flat tax of one per cent, in addition to all other taxes, upon all land values in excess of $10,000, excluding, however the value of all buildings thereon. Commenting on the Nolan bill Gray Silver says that "usually but a very small proportion of the production capital of a manufacturing plant or business establishment is in land. Consequently the manufacturer and the business man would be largely exempted. The farmer, on the other hand, has the major portion of his business capital in land and would be taxed heavily. This bill proposes to tax the farmer on his principal tool of production, the very thing which the factory owner and the merchant ask to be exempted in their case." It will require the united efforts of all the farm organizations and the farm press co-operating on a well defined programme of action, to protect the interests of the farmers when Congress takes up the matter of tax revision.

* * *

The War Department in co-operation with the United States Department of Agriculture is conducting extensive experiments in nitrate fixation work at a large laboratory near Washington. This work was begun in April, 1919, by authority of the Secretary of War, with an allowance of $300,000 a year, and the results so far provide convincing evidence in favor of the operation of the Muscle Shoals nitrate plant. This plant, which cost $72,000,000, is fully equipped with a capacity for producing by the cyanamid process an output of 40,000 tons of fixed nitrogen per year, an amount equal to about 250,000 tons of Chilean nitrates. The plant was tested out in 1918, and a small quantity of fixed nitrogen produced, but since then it has remained idle, and unless operated by the government or private interests will deterioriate rapidly, as does any unused industrial plant.

* * *

In the experiments the cost of manufacturing has been considerably less than the prevailing prices of any form of nitrates now on the markets. Tests are being made to develop forms of nitrates, easy to handle, safe for the crops, and economical in production, alo that may be used in combination with other fertilizing elements.

* * *

The National Lime Association Washington representatives report a shortage of cars both for fertilizers and lime, which is having the effect of cutting down the use of lime for agricultural purposes. The Interstate Commerce Commission, however, recently gave a permit for cars for both lime and fertilizer up to 75 per cent of the actual needs.—E. E. Reynolds.

HARRISBURG LETTER

Uniform Seed Laws Likely—As a result of discussions with official and interested persons in other State it is likely Pennsylvania will take the lead in a movement for a uniform seed law. Preliminary steps have been taken in this State to secure certification of seeds and a plan for certifying seed potatoes is well advanced. Close attention to the seed situation in Pennsylvania is being given by Secretary of Agriculture Fred Rasmussen, Dr. J. W. Kellogg, chief of the laboratory bureau, and Dr. E. M. Gress, the new State botanist, and reports from county fairs indicate that the subject is one of growing concern. One of the chief forms of complaint appears to be against foreign seeds and it is believed if Pennsylvania seeds can be standardized and a good market found first rate seeds can be made available.

State Police Will Help.—One of the most practical steps yet taken by the state authorities to aid farmers and market gardeners who have been suffering from automobile raids, generally supposed to have come from cities, has been worked out at the Capitol and State Policemen on motorcycles will be within telephone call of farmers who may be afflicted by robbers of fields, gardens or orchards. The state police authorities have outlined a general plan and Major Lynn G. Adams, the superintendent, has asked as a vital matter that men making complaints endeavor to get numbers of cars engaged in raids and if possible to secure first-hand information.

Institutes Lagging.—From all accounts the managers of the county institutes have not been on the job as much as usual this year and only a third of the counties have completed plans for the meetings and filed the dates and places with the Department of Agriculture. A few days ago the county managers were asked to complete the arrangements in ten days. In event that nothing is done the istitute allowance for such counties will be withdrawn and no meeting will be held under state auspices. This is one of the first times this situation has occurred and in views of the effort of the state toward specialized speakers to meet the requests the circumstances are regarded at the Capitol as highly unusual.

The Registration.—Folks at the State Capitol, who have been puzzled over this year's campaign in a way they have never experienced, are inclined to look for a Legislature with many pet projects. The State Government has already started to get its plans made, recognizing that there will be a lot of orators in the next session and business will have to be pushed. The registration in the cities has been a disappointment to quite a few people in politics, but there are some opinions voiced here that exasperation over what has to be done to qualify as a voter will cause many women and some men to look carefully after their listing next year and that they will be heard from in election of local officials, especially school directors.

Looking Up Oleo Places.—The State Bureau of Foods has started out crews of inspectors to see what kind of places are making, handling and selling oleo. This business has grown to such tremendous proportions, paying the state close to half a million dollars for licenses, that State authorities are demanding close information. The law lays down certain well defined lines and state authorities are disposed to adhere to them very closely. The saccharin crooks have been pretty well chased out of Pennsylvania and there are some oleo roosters who will be rooted up.

Watching the Hogs.—Secretary of Agriculture Fred Rasmussen believes that if the steps launched in this state the last year or so are followed up hog cholera can be pretty well stamped out and thousands of dollars saved to farmers. The secretary has called attention to the warning issued by the Bureau of Animal Industry which asks that before newly bought hogs are purchased they should be disinfected and examined. Better still they should be looked over by a veterinarian before being bought.

The Apple Crop.—State and Chamber of Commerce efforts to get men and women into the apple raising regions of Pennsylvania to save the crop have been successful in places, but the fact remains that unless aid come quickly many a bushel of apples will be lost as were tomatoes and as may some potatoes. The bounteous yields of fruit and potatoes this year have come at a time when the lure of the city is strongest and the supply of freight cars of the shortest in Pennsylvania.

Pennsylvania to Lead.—The plans made by Chief Forester Gifford Pinchot for the foresters conference here in December, when it will follow soon after the second educational conference, mean that Pennsylvania will take the lead in the matter of a national forest conservation program. As has been pointed out by Mr. Pinchot this is a Rosevelt policy which was not followed up as it should have been and a uniform plan will be agreed upon here and legislation drawn up.

Progress of Consolidation.—From what Dr. Thomas E. Finnegan, state superintendent of public instruction says, consolidation of schools in rural districts which come within school code provisions requiring mergers is going right along, while other districts are being asked to meet obvious situations. Numerous meetings with State officials have been held and the complaint that the present system of distribution of the funds is not falling on deaf ears here. Governor William C. Sproul recently made inquiries as to the conditions and important recommendations on education are looked for in his message to the next Legislature.

NEW JERSEY NEWS

Educational Sunday.—Supported by Governor Edwards and State Commissioner of Education Kendall, the clergy and people of New Jersey observed "Educational Sunday" in the state on Sunday with services of an appropriate character. This occasion was established in New Jersey in 1914 in order to arouse greater interest in public education. The second Sunday in October is usually set aside for this purpose, and this year, Sunday, October 10, was the date for the observance of the event.

In a statement to the clergy and people, Commissioner Kendall said: "The home, the church and the school are jointly and severally responsible for the upbringing of children. The family is—or ought to be—an institution for the welfare of children; this is also true of the church and the school. I again recommend to all of the clergy of the State, irrespective of denomination, that sermons upon the importance of education, and particularly, upon its importance in a democracy, be preached on that day. The schools have always had an efficient ally in the church."

Consumers' Association.—Much interest is being devoted by the people of the State in the chartering in the office of the Secretary of State of Ford's Consumers' Association, Inc., which has started its operations in the village of Fords, Middlesex County, in carrying on a co-operative plan of production and distribution of the necessities of life from the farm and other places by means of branch stores and warehouses. It is believed that the association will be better able to cope with the high cost of living through its system of working, and that the founding of this organization will lead to the chartering of similar ones in the near future.

Crop Situation.—The harvest of corn is almost completed, and there has been some husking in sections in the southern part of the state. Preparing and sowing wheat and rye continues. Buckwheat is being harvested, while cranberries are nearly all picked. Tomatoes are almost done in northern districts, but are still going to the canneries in southern counties. Late planted potatoes in southern sections are small as yet and need about two weeks more of warm weather.

Farms Decrease.—There has been a decrease in the number of farms during the past ten years of 3,815 or 11.4 per cent. In 1910, there were in the State a total of 33,487 farms, as compared with 26,672 when the 1920 census was compiled. The decrease is much greater than during the ten-year period from 1900 to 1910. In 1920, there were 34,650 farms in the State. During the following ten years 1,163 of these passed out of existence, which represents a falling off of 3.4 per cent.

Urge Bridge-Tunnel.—In the platform of the Democratic party adopted during the week is a plank heartily urging the people of the State to vote to favor a referendum that will come before them at the election on November 2, and which, if receiving the required number of votes, will provide the bond issue for the construction of the much-desired bridge over the Delaware River between Camden and Philadelphia for the use of truckers and other persons in South Jersey and the vehicular tunnel under the Hudson River from Jersey City to New York City, which also would mean much to the produce growers and others in the agricultural counties of Bergen, Passaic and other districts in North Jersey. —Kelly, Oct. 11.

NEW YORK LETTER

Holstein Plans.—A series of meetings of Holstein breeders' associations of the state is being held to promote the January sale of animals of that breed. A prize of $350 is offered to the best Holstein exhibit by a county organization at the sale.

Potato Price.—Growers of potatoes are interested in the statement by the bureau of crop estimates that the 1920 yield will be 413,000,000 bu. Also that when the yield has exceeded 400,000,000 that the March price has been no higher than the December price. A late rot is sweeping the fields of this state. If as destructive as some fear who say fifty per cent is lost and if widespread, the growers may well hold their crops. If otherwise, when shrinkage is considered, early sales are best. But the present price of 65 cents a bushel at the car side is very low.

City Absorption—Recent statistics show that New York city has absorbed two-thirds of the state's growth in the past ten years. This cannot continue indefinitely. The farms need more men, not more land if the cities are to be fed.

Student Dishonor.—Cornell has completed its inquiry into examination frauds of last June. The college faculty finds 106 students guilty. A large share of the offenders were dismissed, but have been again received on probation with credit for last year's work cancelled. They were most of them freshmen. Honor in class work and in sports should be cherished with vigor.

Wool Pool Developments.—W. H. Wood, of New York city, has been engaged to take charge of the details of disposing of the state's pool of wool. The wool is being assembled in Syracuse, where it will be graded. Mr. Wood has had 23 years' experience in grading and selling wool. He will visit the county associations and give instructions in preparing wool for market. He aims to build up a reputation for high grade New York state wool.

Seeds for Four States.—Under leadership of the New York G. L. F. Federation Exchange the farmers of four states, New York, Pennsylvania, Ohio and Michigan, will be insured of a supply of seeds which have passed rigid tests. Seed corn developed by Prof. Barrow, of the State College, "Cornell 11" corn, will be exploited as specially adapted to state conditions. The exchange furnishes a dryer for this corn, so larger supplies can be obtained.

Foreign Demand for Apples.—Growers are urged to make use of the possibilities in English and Scandinavian demand for New York state apples. Freight rates to the latter market are moderate and the duty 1½ cents a pound. Boxed apples, instead of barrels, are preferred.

Cider Manufacturers Appeal.—C. R. White, director of co-operative organizations of the state, headed a representation of New York fruit growers in Washington last week to secure removal of the ban on cider manufacture, which holds the makers responsible for alcoholic content above 1 per cent developing in their products in other hands. Commissioner Williams promised to go as far as possible in trying to secure this.

New Marketing Plan.—The trying situation in potatoes and cabbage will induce central New York farmers in fourteen localities to further test the plan of selling through the North American Fruit Growers' Exchange. A sales office will be opened in Cortland. Farmers feel that some radical changes are necessary, with cabbage selling at loading stations for $5 per ton and to the consumer at $40 a ton. Potato farmers of seven states have organized themselves into sales associations. The big purpose is to evenly distribute produce through the markets of the country by as short hauls as possible and to release cars promptly for reloading. Tremendous economies are needed and can be made, it is believed. —M. G. F.

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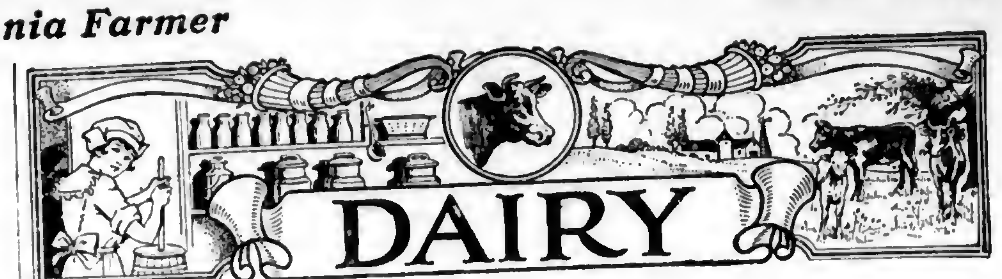


DAIRY

THE NEW YORK MILK FIELD

We are right in the midst of the effort to bring across the Dairymen's League pooling plan. It is making progress at a good rate but one cannot say now that we are to get the full 50,000 members signed up. One noticeable thing about the situation is the fact that generally speaking those localities where business men have much to say in the league there is greater difficulty to get signatures. They say the new contract placing all the funds in the hands of the League for distribution equitably to all producers is not business. Very well all that is claimed for it is cooperation. It is getting the same advantages for the other man that we enjoy ourselves. By the way, it is possible to put this in a working form beginning October 1st if signed up by the necessary number November first.

Objectors urge that it will cost a lot of money for office help to make the distribution. It will not cost as much as it does now because it was the case last spring and summer and it is the same now. Undoubtedly this is wrong. The proportion that these manufacturers have been using at this season of the year is not so large as I had supposed. I am told that now, since the October milk is sold to the distributors, only about 20 or 25 percent remains unsold. Even this is a large amount, but it is not so bad as I had supposed.

In some cases the farmers are able to rent plants where they can make butter and cheese. The League plants can take on more milk and can use large quantities of cream that may be shipped to them. The League can condense a good deal more milk and put it on the market now at $1.25 a case less than the condensing "trust" are asking. I am not saying that this will be done for I do not know all about it. It seems almost certain that those points, where a beginning was made to purchase or build plants, will now go on with their earlier plans, and that some further advance will be made at certain new points.

Scene at the Recent Grove City, Pa., Dairy Cattle Show

will be done all in one office with a full equipment of machines. Then it is said that now this work is paid for by the buyers while under the new plan it will be paid for by the farmers. Just bet your boots that the farmers pay for it now. Really when it is all figured out the cost comes to considerable less than a half cent a hundred of milk any way. When we get this coming along there will be an office up-state somewhere for carrying out the work. Rents in New York City are high, perhaps ten times what it will cost in some central point up-state.

Milk is sold for October at the old September price. The price had been set at $3.85 altho some wanted it made $4.06. The reduction of 20 cents a hundred from the price first fixed is the first reduction that I know of being made after it was once set. It is a good plan to say what the price should be and then stick to it. That is the policy of the League. In this particular case with marketing conditions as they are it was very likely for the best that the reduction should be made. So far as I have learned farmers are approving the action of the executive committee.

The big bothersome question now is what shall be done in those cases where there is no market for the milk. At this writing it is impossible to make anything like a complete answer. Many farmers have hardly come to realize that the condensers and other manufacturers will not take the milk. Too many have assumed that it is bluff that the dealers are using. They say that such This too is subject to revision as time goes on. One cannot tell all the things that are to take place under the present strained conditions.

The manufacturers say, and many of the good judges believe that there is to be no let up in the conditions as we now find them for three months and perhaps longer. The distributors say that later fall and winter prices for milk will not advance, as there is an abundance of milk. We can hardly deny very much of this, yet possibly the situation will change shortly.—H. H. L.

BUTTERING OUR OWN BREAD

Numerous references to importations of butter from Denmark, Hollandfi and other countries have caused many persons to believe that we depend upon foreign countries for a considerable part of our butter supply. This is very far from the truth according to reports to the United States Department of Agriculture. We export more buter than we import and our importations are insignificant compared with the total consumption in this country.

The greatest importation of butter on record in the United States was for the calendar year 1919, when it reached only 9,519,368 pounds; the exports for the same year were 34,556,485 pounds; which gives a net export of 25,037,117 pounds.

The exports of butter have never been high, but they have exceeded the imports except in a few years. In 1871 there was an import of 4,800,000 pounds of butter and an export of only 3,900,000 pounds. The next

time the imports exceeded the exports was in 1914, when the imports were 7,842,000 pounds and the exports were 3,693,000 pounds. During and since the European war the exports have been much larger than normally. The importations of butter from 1884 to 1909 were from a few thousand pounds to a little less than a million pounds, while the exports ranged from five million to twenty and even thirty million per year.

The consumption of butter in the United States is so large that it is hard to realize—a little more than 4 million pounds daily. The imports for 1919, therefore, totaling 9,500,000 pounds, would last us from Monday until Wednesday morning. The 35 million pounds we exported would last only a little over a week and a day.

DAIRY NOTES

A dairyman need not be discouraged because he does not own every modern improvement. Very few farmers work under ideal conditions. But all should strive to do the best they can and make profitable improvements whenever the capital is available.

* * *

One dairyman in our section states that it is easier to start milking the heifers with a milking machine than to do it by hand. The young cows seem to take very readily to the machine milking and seem less nervous than when first milked by hand.

* * *

Another dairyman friend says that the milking machine has taken the "sting out of his business." He worked on the farm with his father and before using the machine neither of them had the opportunity to leave the farm for a day. Since using a milking machine one of them can occasionly take a short vacation. It helps them to like the dairy business and saves time that can be used in other productive work.

* * *

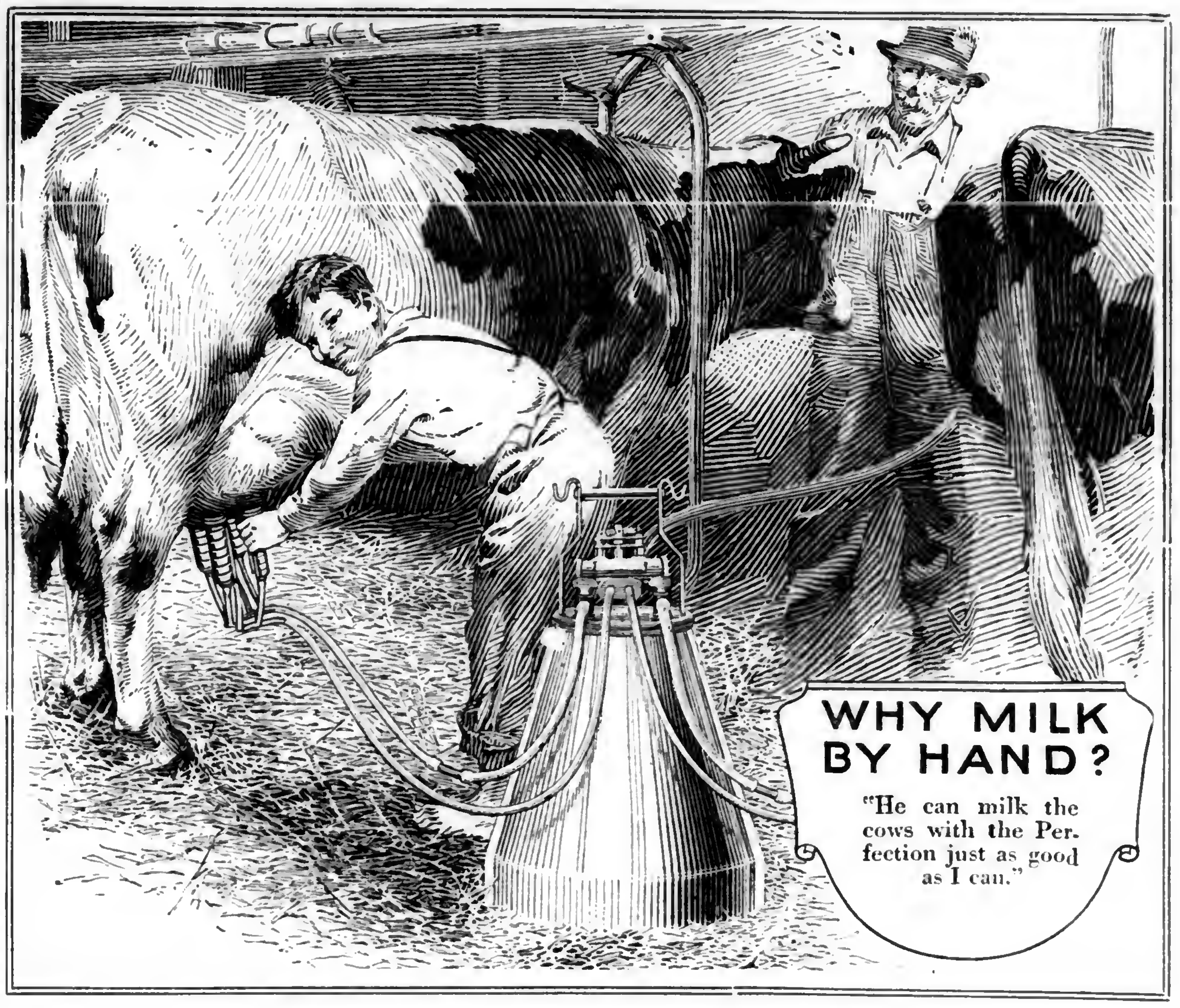
There is an art to milking. The good milker works fast but is not rough. He does not pump and rock the udder and he does not putter and waste time. He is clean personally and does not milk until the cows look clean. The good milker milks each cow perfectly dry and strips out the milk until the cow is dry. The best milkers make every effort to milk on time at regular intervals of twelve hours each. The results in the production of more milk and the cows are always ready.

* * *

A little grain at all times of the year helps to make the cows friendly. They are glad to come to the barn and learn to understand and obey the caretaker who furnishes them with the extra treat. Cows that are given some grain seem to keep in better condition than ungrained cows. Of course grain costs money but only a little of it is needed at each feeding in order to bring about very good results.

* * *

We find that selling butter direct to private customers is profitable. It can be delivered with eggs and produce thus reducing the cost of marketing each item. If fine quality butter is produced it will bring the same price that consumers have to pay at the store for butter. Good quality butter weans the city family from the use of oleo. Sometimes they will also buy butter milk. If there is no sale for it the buttermilk is fine for poultry. It means more eggs from the hens and more rapid growth in the chicks.—R. G. K.



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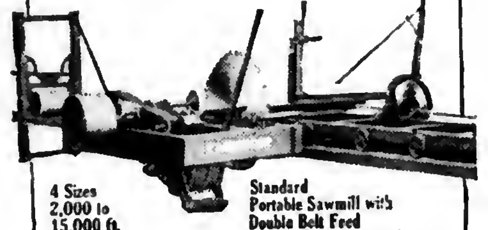
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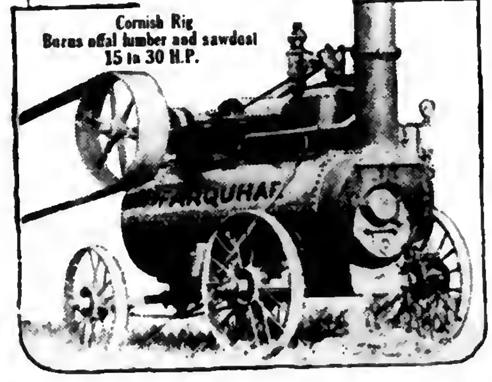

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HORTICULTURE

STORING CABBAGE FOR WINTER SALES

By C. R. MASON, Pa. State College

In the fall when late cabbage harvest is in full swing, placing of much of the crop on the market would create a greater supply than demand and cause the price to drop severely. This is the main factor that influences growers to store cabbage until mid-winter or spring, at which time the market demand will in all likelihood provide a fair profit on the product.

A Co-Operative Storage Plant in Virginia Fruit Section

Another important factor influencing market gardeners to store their cabbage is the fact that many of them desire to have a supply of this vegetable for their customers thruout the winter.

Success in keeping cabbage depends on the variety as well as on the conditions under which the heads are stored. The Flat Dutch class as well as many other cabbage varieties that mature in the early fall had better be sold at that time, since under average storage conditions they will not keep in first class condition for any great length of time. The Danish Ball Head class includes the best keepers.

Danish Ball Head Cabbage

It is essential in storing cabbage, not only to keep the heads from rotting, but also to keep the cabbage in a crisp, fresh condition. Sound heads are the first requisite; rot starting in one diseased or injured head, will quickly spread to others that are in close proximity.

To keep cabbage crisp and fresh, the following points should be observed:

1. A low temperature is necessary in order to check the process of decay; a temperature just above freezing is best.

2. Air containing a good percentage of moisture is needed to prevent wilting; yet ventilation is necessary to prevent excessive moisture and heating.

3. Sufficient protection should be given to prevent hard freezing, tho slight freezing often does no harm.

When a grower is near a large city where cold storage facilities are available, he may often save labor and risk by taking advantage of a good cold storage house. Such a plan is followed this year by W. B. Walton, a well-known market gardener of the Harrisburg district, who heretofore has buried his fall crop of cabbage in the field until wanted for the winter market.

Cabbage can be successfully stored in the field if the essential points of good storage are observed. This is the practice followed by a large majority of market gardeners.

The crop is usually harvested by bending over the cabbage heads with the foot and chopping thru the stems with an axe or a hatchet. Stubs four to five inches long are left for convenience in handling. Many growers prefer to leave the roots attached to heads that are to be stored, especially if the heads have not attained their full solidity; in this case the heads are pulled up rather than out. Roots are also retained on heads that are to be saved for seed-raising the following season.

A well-drained location is picked out for field storage, perhaps right in the cabbage field, tho usually convenient to barns or other buildings where the crop is finally prepared for market. A shallow trench may be made or the cabbage may be placed on top the ground. The bottom of the trench, or the strip of ground where the cabbage is to be laid, as the case may be, is covered with straw or leaves, and the cabbage laid with either the tops or sides of the heads resting on the straw. The heads are placed in long rows, two or three heads in width, with usually a second layer on top, one or two heads in width.

After the heads have been placed in the trench, they are covered with a layer of straw, and the plow is called into use to throw furrows to the sides of the cabbage rick. This partly covers the heads and a further covering of earth is thrown on the heads with shovels. As the weather gets colder it may be necessary to add additional layers of earth or straw, depending on the locality where stored. Six to eight inches of earth is usually enough covering for this vegetable.

The cabbage may be laid in conical piles rather than in a long, low rick as that just described, but the labor involved in covering the former with earth is much greater.

Triangular chimneys made of old boards are run up from the cabbage heads thru the earth covering to provide ventilation. One chimney every eight or ten feet should be enough. The tops of these chimneys may be covered over when the temperature on some nights drops too low.

The principal objection to storing cabbage in the way just described is the difficulty and discomfort of digging out the heads in very cold weather. However, on mild days, enough may be removed and placed in a cool cellar or barn to meet the market demand over an ensuing severe weather period.

Some growers prefer to cover the cabbage with a very heavy layer of straw rather than use earth. Two to three feet of straw is piled over the heads, allowed to settle for a few days, then bundles of fodder are set on both sides of the rick to shed water and to keep the straw dry. This practice is more expensive than using earth, but has the advantage of ease of digging after freezing weather sets in.

If a cool cellar is available, it is well to store some cabbage there for early winter sales. In such a place the heads may be placed on a layer of straw on the floor; in boxes, stems up; or the outer leaves may be removed and the cabbage laid on shelves or put in open crates. A few heads for home use may be stored in a barrel laid on its side on top of the ground and covered with layers of straw and earth.

Because of the odor, it is not desirable to store cabbage for any length of time in the residence cellar.

Sound cabbage heads, and a cool moist, well-ventilated, well-protected and well-drained storage location for them, will place the market gardener in a position to secure a steady income from this popular vegetable thruout the winter months.

THE FRUIT MARKET OUTLOOK

By J. P. STEWART

There is no doubt of the fact that the fruit grower has also been caught in the maelstrom of descending prices so far as his product is concerned. This would not be so bad were it not for the fact that his costs of production are the highest ever known. With barrels costing fully $1.50 by the time they reach the packing shed with labor costing from $4 to $5 a day or even more, and with first-class varieties of apples selling as low as $3 to $4 a barrel in the principal markets, there is evidently no conspicuous profit in the fruit business right at the present minute.

This would naturally lead one to consider storing his fruit, but here again he is confronted by unusually high costs, and also by the fact that practically everyone else is also looking for storage space, so that very little of it is left. With so much fruit going into storage, moreover, it is likely to be fairly late in the season before any material relief is offered to the present low prices.

This whole condition is not wholly unexpected, and in fact was anticipated by several of the keener growers, with the result that they jumped out and sold their crops very early in the season, before the big slump occurred at prices which looked rather low at that time, but which would be very acceptable now to anyone with good fruit to sell. In spite of the present rather blue appearing outlook, however, the growers should not be panicky and try to unload their fruit at practically any price. Many growers are likely to do this, especially as their picking season advances, and it is such action even on the part of a few that upsets the market for everyone else.

Good Type, Uniform Cabbage Graded For Market

The present unfortunate situation again emphasizes the great need of a general organization of the growers for the purpose of selling their products. One or two seasons like the present, moreover, is likely to awaken much more widespread interest in such things here in the East, as they have already been driven into it in the West.

If one has really good fruit now and can not get any offers that seem to be full value for it, we are inclined to think that it will pay to store it, in spite of the excessive prices for storage. The very fact that apples are so cheap just now, will undoubtedly result in the neglect and waste of a lot of the present big crop, with the usual result of big prices in the spring, after practically all of the fruit has passed into the speculator's hands. One man's guess is as good as another's but our guess at present is that it is likely to pay the man this year who is in a position to go along with the speculator and hold for spring prices.

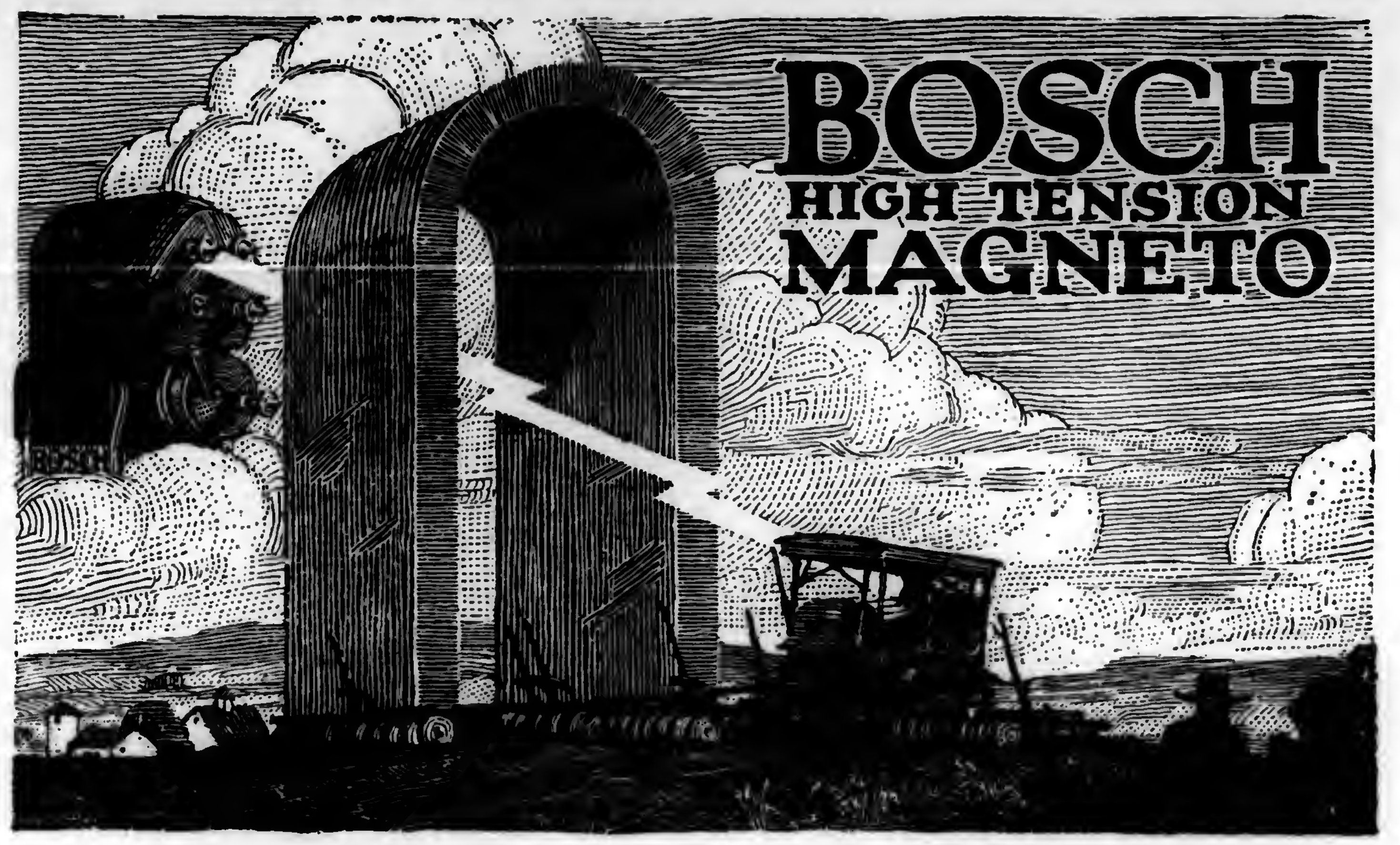
CLEAN UP GARDEN IN FALL AND FOOL PESTS

Since disease spores and insect larvae spend the winter under rubbish and boards, in fence rows and on weeds and crop refuse, a thoro cleaning up of the garden plot will decrease the amount of trouble for next year and will also improve the general appearance of the property.

Stalks and leaves of crops as well as weeds should be pulled and either burned or piled with lime in a compost pile. If composted, they should remain at least two years in order to kill the weed seed. This material makes good fertilizer when well rotted.

All pieces of boards, garden stakes, burlap bags, or like material commonly found in the garden in the fall should be stored or burned.

A great deal of trouble from weeds can also be eliminated by keeping the borders and edges cleaned, the state college gardeners at Ithaca say.



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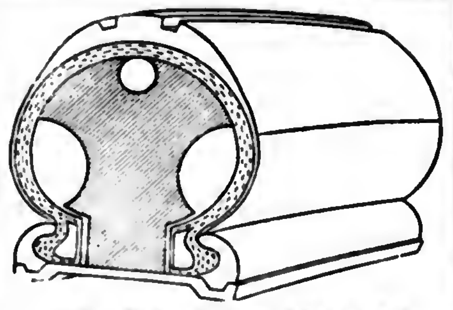

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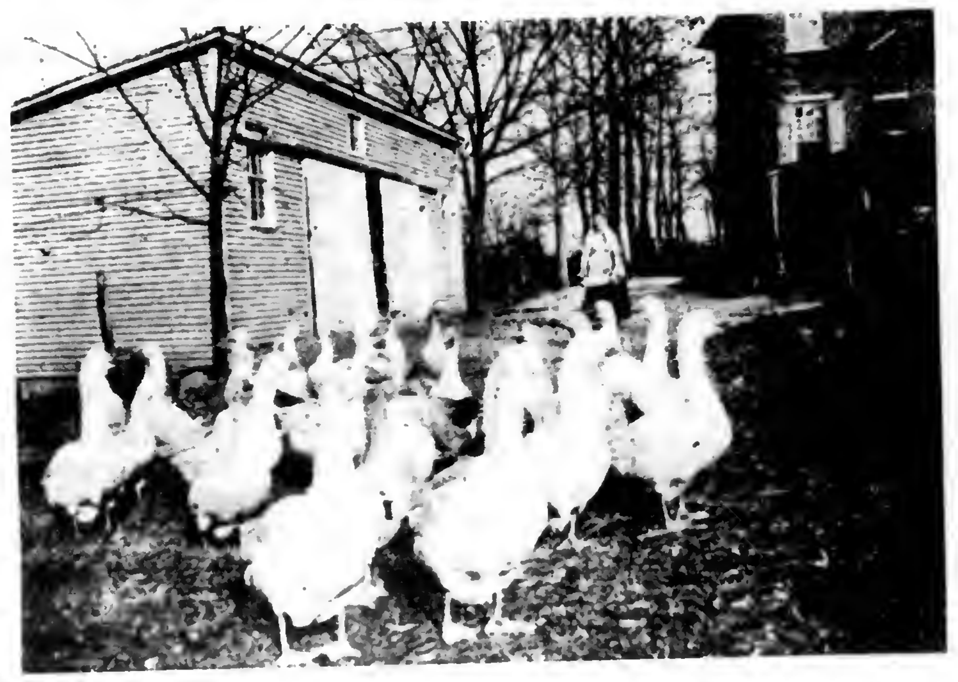
POULTRY

THE CONTENTS OF AN EGG.

By MICHAEL K. BOYER, N. J.

The quality of the contents of the egg is much under the control of the poultryman. When the white, or the albumen, of the egg is watery, it is an indication that a good, balanced ration has not been fed. There is a lack of protein in the fed. In the white of the egg there is 14½ per cent of protein. On the other hand, when a ration rich in protein is given, that watery condition is changed to a thick and attractive white. Clover, wheat bran and wheat middlings will have a telling effect in that respect.

The white of an egg when freshly broken should not only be thick, but it should have a fresh and glistening appearance. According to some egg farmers, the egg laid in spring will "stand up" better than one laid in summer. To a certain extent this is so, but the chief reason for such a condition is, I believe, more due to external factors that act upon the egg after it has been deposited in the nest.



A Flock of Geese is Often a Profitable Investment

Albumen is a transparent liquid, free from odor and tasteless when the egg is fresh. It coagulates on the application of heat at 140 degrees Fahrenheit, and is insoluble in water. According to chemical analysis it is composed of carbon, oxygen, hydrogen, azote, phosphorus and sulphur in variable proportions. When the egg gets stale a part of the oxygen and hydrogen (which produces water) evaporates.

Water forms a considerable portion of both the yolk and white. The pale, sickly-colored yolk found occasionally in eggs during the winter, is due to scarcity of green or succulent feed.

Food, as a rule, gives color to the yolk of the egg. It is noted that hens on range in the pasture lay eggs with rich-colored yolks. Clover hay, steeped or cooked, has a tendency to produce good color to the yolk. Hens on range that are fed more or less corn, also give the desirable rich color to the yolks.

There is a large percentage of sulphur in the yolk of an egg. When boiled, it is often noted in eggs that where the yolk joins the white, there is a more or less pronounced greenish color. To the inexperienced this created a suspicion that "all was not well," but as a matter of fact it is due to dark-colored compounds of sulphur and iron produced while boiling. The blackening of silver forks and spoons when they come in contact with eggs on the table, is caused by the action upon the silver of the small amount of hydrogen sulphide or other sulphur body liberated from the white of the egg when it is cooked.

Pale yolks are more apt to have less consistency than yellow ones. Upon breaking open an egg it will be noted that the pale yolk flattens out, while the yellow yolk stands up round and full. The whites of pale yolked eggs are also thinner than those of yellow yolks.

The analysis of an egg shows protein, fat, water and mineral matter. In protein we have a nitrogenous element that builds up and repairs the tissues of the body; fat supplies energy. While the white of the egg is practically pure albumen, it also contains phosphoric acid and sodium chloride, or common salt. The fatty part of the egg is found in the yolk—phosphorus, calcium, magnesium, potassium and iron.

The Hen While Laying

Some hens will do good laying in spring, and then go on a vacation for several months. Other hens in the same flock will lay steadily throughout the year. While hens of the latter class do not produce an egg every day, their periods of rest are so short that they easily take the lead and keep it.

The first few eggs produced by a brown-egg hen are usually of a rich color. As the hen continues laying, especially if she is doing good work in that capacity, those brown eggs become more pale in color. Science tells us that all this is due to a certain pigment from which the coloring comes, and which in its first strength is of good color.

Food has no influence upon the size of the egg. That is the work of selection and breeding. Two years (or older) hens as a rule lay larger eggs than do hens only a year old, and yearlings lay larger ones than pullets. Eggs increase in size as the yield decreases, and this is especially so with hens as they become older.

Food is the greatest factor in egg production. Unless the proper material is furnished them, hens will be unable to manufacture many eggs. While a hen is not apt to overfatten while laying, she may shorten her laying period when compelled to gc on a diet of corn. Corn is no egg food, but a little of it should be in every laying ration to balance it. But the food must be sufficient fat-producing to furnish the required energy and fat needed by the body, and a surplus of the latter to be used in making the yolk of the egg.

A hen that lays every other da will lay from three to five times he weight in the year. Her ration mus be well balanced to keep her workin at high pressure. It is difficult t mix a grain ration which does no contain a superabundance of fat, an at the same time contain sufficient the proteids to use in the productio of a large number of eggs. Unless hen is fed enough proteids whic produce albumen, production of egg will fall off. All grains contain albumen, so do milk, lean meat and green feds. These each contain various proportions of the fats also.

The laying hen has a good appetite and thirst. The amount she will consume varies with the individu rather than the breed. A hen's dige tive capacity is limited. The number of eggs produced is determined by the difference between body maintenance and digestive capacity. Maintenance is largely governed by conditions under the control of the poultryman.

It may be counted upon that a hen that is laying well is enjoying go health. She is constantly on the alert, going to and fro, stopping lo enough to scratch out food th might be buried in the litter, or digging up a worm or racing an inse. She is always busy, and this consta exercise is what is keeping her good health.

When a healthy hen starts layin she will lay regularly, provided she is properly fed and cared for. If she is overfed her system will become clogged with surplus nutrients, an there will be a slacking off in production. Fright, or placing her new quarters, have a tendency check the egg yield. Contentmen that "home" feeling will work wonders for good.

Egg production depends upon the activity of the ovaries and this a tivity in turn largely depends up the physical vigor of the individ hen. Heavy egg production is pr cipally a problem of how to maint laying hens in a high state of healt and the question is how to feed order to accomplish this purpose. must not be forgotten, however, th constitutional vigor is as much matter of resh air, exercise an inherited stamina as it is a matte of food. A hen must have food in order to furnish energy to carry o the various activities of the body nd to keep the body warm. She m have food, also, to build up the ti sues and organs and keep them i repair to supply material from whic eggs can be elaborated.

It is an enthusiastic fruit grower who says horticulture is the oldest of agricultural branches; not until Adam and Eve left the garden of Eden did they have to take up ge al farming!

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Milk, Cheese and Eggs

FOOD VALUES AND WAYS TO USE THEM

By Pearl MacDonald, Penna. State College

How Often to Eat Meat.—Meat once a day is sufficient for any one's body needs, and for those who spend much time in doors doing only light work three or four times a week is often enough to eat meat. Waste products from the digestion of meat are eliminated thru the urinary tract, hence so much meat in the diet that the expenditure of physical energy does not make use of it all means that the urinary organs, particularly the kidneys, will be overworked. Therefore guard against excessive meat eating.

Milk and Cheese vs. Meat.—Milk and cheese have the same protein (body muscle building) material as in meat, but in a very desirable form, so that it can be very completely digested and absorbed. Therefore they are better than meat for less active people. The butterfat in milk and cheese is most desirable in the diet, because it is not only more palatable than other fats, but it contains an abundance of those protective substances, vitamins, about which we have been reading and hearing a great deal the last few years as being so necessary to physical well-being, particularly in the case of growing children. The mineral matter in milk also gives it an important value; especially is the calcium (lime) in milk needed by growing children.

How About Eggs?—Eggs rank next to milk in the character and the quality of the protein, fat and vitamins and mineral matter which they afford. Cheese and eggs may replace meat in the diet to almost any extent, and the body efficiency still be maintained perfectly.

Ways of Serving

Milk, cheese and eggs may be served alone or in combination in such a great variety of ways that they are an ever ready resource for the housekeeper who is distant from a meat shop and has on hand little variety in her supply of preserved meats. Milk and eggs most farm women have daily at hand, and they should also keep a supply of cheese handy. Following are some suggestions for using milk, cheese and eggs:

Lemon Fluff

Ingredients:—½ cup sugar, 4 eggs, juice of 1 lemon, and a dash of salt.

Method.—Beat the egg yolks thoroly, add the sugar, lemon juice and salt. Put into a dish set in hot water, and cook, stirring constantly to prevent lumping until the mixture thickens. Remove from the fire, cut and fold in the beaten whites of the eggs, and set away to chill before serving. This makes a light but nutritious and very delicious dessert.

Cheese and Rice

Ingredients.—2 Cups cooked rice, 1 cup cheese grated or cut into small pieces, and 1 cup or more of medium thick white sauce.

Method.—Put a layer of the cooked rice in a greased baking dish, then a layer of the white sauce, sprinkle this with cheese quite liberally. Repeat, and cover the top with buttered bread or cracked crumbs. Brown in a moderate oven. You know what "white sauce" is, do you not? That it is just a white gravy made of butter, flour and milk, seasoned to taste? A good proportion of ingredients for a medium white sauce is: 2 Tablespoons flour, 2 tablespoon butter, ¼ teaspoon salt, 1 cup milk, and a dash of pepper.

In place of rice, cooked potatoes or cooked hominy could be used.

Cottage Cheese Salad

Mix 2 cups cottage cheese and one cup pickled beets (cut up) with some boiled salad dressing made thus: Make a smooth paste of 2 tablespoons butter and 2 tablespoons flour and part of 1 cup of milk, then add the rest of the cupful of milk, and cook 5 minutes, then draw to the back of the stove and thoroly stir in 1 beaten egg, cover and let stand 10 minutes to cook the egg. Then add ⅓ cup vinegar, 1 teaspoon salt, ¼ teaspoon pepper, and ⅛ teaspoon mustard, mixing them in thoroly.

Fresh or Stewed Pears Afford a Tasty Salad

Baked Rarebit

Ingredients.—¾ Cup soft cheese, 1½ cup milk, 3 eggs, 1½ teaspoon salt, ⅓ teaspoon paprika, 2½ cups medium dry bread crumbs.

Method.—Cut the cheese into thin slices(sprinkle a layer of the bread crumbs in a greased baking dish, cover with ⅓ of the cheese, sprinkle with ⅓ of the mixed seasonings. Repeat twice. Now beat the eggs slightly, mix with the milk and pour over the cheese and crumbs. Bake in a moderate oven about 25 minutes.

Quince Foam Makes a Delicious Dessert. Try Some

Milk Sherbet

Ingredients.—4 Cups milk, 1½ cups sugar (part syrup may be used), juice of 1 lemon.

Method.—Mix the lemon juice with the sugar, add the milk slowly, stirring constantly. If the milk is added too rapidly, it will curdle, which tho it does not affect the quality of the sherbet does affect its appearance. Now freeze and serve.

Cream of Celery Soup

Now that your celery is ready to use have this soup quite frequently. The children will especially relish it for supper when they come home from school on a cool autumn evening.

Ingredients.—2 Cups white sauce, 1 cup boiling water, 1 tablespoon butter, 1½ cups celery cut into small pieces, 1 small onion, and a dash of salt and pepper.

Method.—Cook the celery and onion in water until they are tender, then rub them thru a sieve, add the seasonings and the white sauce, make hot and serve at once. This method may also be used to make cream of potato, spinach or pea or bean soup. If in any case the soup should be too thick, thin it with some hot milk. A very thick soup is a puree, you know, and obviously contains more nourishment than a thin soup.

Steamed Custard

Ingredients.—2 cups milk, 2 or 3 eggs, ¼ cup sugar, a dash of salt and flavoring.

Method.—Beat the eggs slightly, and add the sugar and salt, then the milk, which should be scalding hot; add the milk slowly and stir as you add it. Cook in a double boiler until the mixture will coat the spoon. Add the flavoring after you remove the custard from the fire. For flavoring one of the following may be used; ½ teaspoon vanilla or lemon extract, ¼ teaspoon bitter almond extract, ¼ cup cocoa, 2 ounces chocolate melted in scalding hot milk, or ¼ cup cocoanut stirred into the custard when it is partly cold.

Baked Custard

Ingredients.—2 Cups milk, 2 eggs, ¼ cup sugar, dash of salt.

Method.—Beat the eggs with the sugar and salt, then add the milk (cold) and the flavoring. Pour into custard cups or molds, set in a pan of hot water and bake.

To test a baked custard insert a knife, and if it comes out clean, the custard is done.

One tablespoon of cornstarch will replace one egg, but of course the nutritive value is not the same. The flavoring may be the same as for the steamed custard.

Creamy Rice Pudding

Ingredients.—2 Cups milk, 2 tablespoons rice, 2 tablespoons sugar, and a pinch of salt.

Method.—Wash the rice, mix the ingredients, and pour them into an oiled baking dish. Bake 3 or 4 hours in a very slow even, stirring occasionally to prevent the rice from settling to the bottom of the dish.

Junket

Ingredients.—1 Cup milk, 2 tablespoons sugar, 1 teaspoon lukewarm water, ¼ junket tablet and ½ teaspoon vanilla extract.

Method.—Heat the milk until it is lukewarm, then add the sugar and the flavoring. When the sugar is dissolved, add the junket tablet dissolved in the lukewarm water, and pour immediately into cups or glasses. Let stand in a warm room until firm like jelly, then put in a cold place. Serve with sugar and cream or else with a soft custard. Or it may be served with a variety of fruit or fruit sauces. And for the flavor, in place of the vanilla you may use one of these: Cinnamon, nutmeg, chopped preserved ginger, cocoanut, cocoa, or any fruit flavor.

Ice Creams

And there are the ice creams. Keep these directions, so when there is ice the coming winter you can make use of them. I am giving directions only for plain ice cream. You can vary them in any way you like by adding fruit, chocolate, or any kind of a fruit or nut or custard dip.

Plain Ice Cream (Cooked).—Mix together 1 cup sugar, 2 tablespoons flour and a dash of salt. Add 2 eggs well beaten, then 2 cups scalded milk. Cook in double boiler until the mixture thickens, then place directly over the fire, and let come to a boil to thoroly cook the starch in the flour. Cook, stir in 1 teaspoon vanilla and 1 or 2 cups cream, and freeze.

Plain Ice Cream (Uncooked).—Mix 4 cups cream, ¾ cup sugar and 1 or more teaspoons vanilla, and freeze. Other flavorings may be used, for instance: 1 or 2 cups crushed fruit, such as pineapple, fresh or canned peaches, strawberries, rapsberries, banana. The amount of sugar needed will vary with the tartness of the fruit used. Or 2 tablespoons finely chopped preserved ginger is good for flavor variety. And sometimes you may like to use a coffee flavor prepared thus: Scald ½ cup dry coffee in 1½ cups milk, strain out the coffee grounds, and add the milk to the above recipe, and freeze.

FRESH OR STEWED PEARS AFFORD A TASTY SALAD

Served on a bed of crisp lettuce leaves, as illustrated, halves of pears, either fresh or cooked, make a delicious salad for these fall days. Dress the salad with a cooked salad dressing slightly sweetened, or with a French dressing made of salad oil and lemon juice in proportion of 1 tablespoon of lemon juice per 3 tablespoons of oil, and sweeten with two tablespoons sugar, and add a dash of paprika to give it a pretty red color and a piquancy of flavor, mixing these ingredients until they form a creamy blend.

QUINCES ARE PRIME NOW

Quinces are best after the first frosts, and you are doubtless thinking about making them up now. Try these ways for using them.

Quince Honey

Per 1 cup grated juicy ripe quinces allow 3 cups sugar and 1 cup water. Boil the sugar and water until the liquid will thread from the end of a fork, then add the grated quince, and boil until it is as thick as honey. Pour into sterilized cans, and seal while hot with covers and rubbers that have also just been thoroly sterilized by boiling for at least 10 minutes.

Quince Foam

Per 1 cup whipped cream add ⅓ cup quince honey, and flavor with a few drops of vanilla and 1 drop of bitter almond extract. Chill this mixture, and serve in glasses, sprinkled with blanched almonds chopped fine and delicately browned, or else with finely chopped hickory nut meats.

Quince Butter

Wash the quinces, peel and remove all the discolored spots. Cut into quarters and cook in sufficient water to cover, cooking slowly until the quinces are tender. Then rub thru a fine sieve, and for every pound of the pulp add ¾ lb. sugar. Mix and boil slowly 30 minutes, stirring to prevent burning. Pour while hot into cans or jelly glasses, and when cool seal with melted paraffin. The juice of 3 oranges for every 3 lb. pulp makes a finer tasting product.

Canned Quinces

For every pound of the fruit allow ¼ lb. sugar. Cook the quartered quinces in water until tender, then pack in cans, and use the water in which they were cooked for making the syrup with sugar in the proportion mentioned above per enough of the water to make a thin syrup, boiling the sugar and water together 2 minutes. Add the syrup thus made to the quinces in the cans, and process the cans in a water bath for 10 minutes. Or you can put the quartered quinces at once into the cans, fill up with syrup made in proportion of 3 cups sugar per 2 cups water and heated only until the sugar is dissolved, and process the cans 45 minutes in the water bath. The rubbers should be on and also the covers loosely. Tighten covers at once when cooking stops.

Baked Quinces

Wash and remove the cores with a corer or with a thin knife. Fill the cavities with sugar, put in a baking dish with a little water, and bake until tender. Serve with thick cream or with whipped cream.

Quinces Canned in Cider

Wash thoroly some nice quinces, but do not peel. Put them in a deep enamelware baking dish, half fill the dish with sweet cider, and bake slowly in the oven 4 hours. Then take out the quinces, quarter them, take out the cores, and pack the quarters in sterilized can. Per every four quinces add 1 cup sugar to the cider, boil four minutes, pour it over the quinces in the cans, and seal with hot sterilized covers and rubbers.

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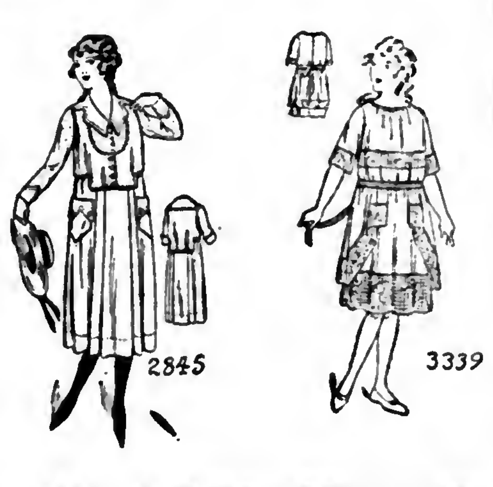
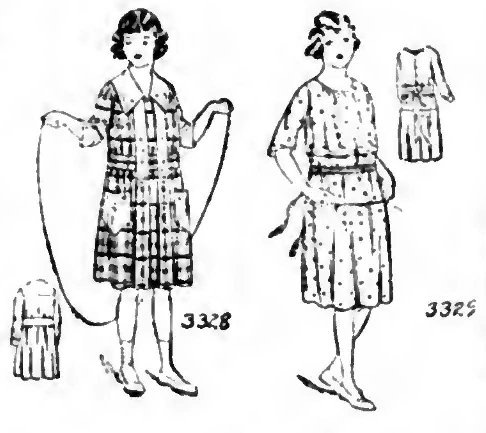
2845.—A Smart Costume for Growing Girl.—This makes a pretty suit for taffeta, shantung, gabardine or serge. The waist could be of matched satin. The design is also nice for gingham. The pattern is cut in 3 sizes: 12, 14 and 16 years. Size 14 requires 5 yards of 44-inch material. Pattern, 10 cents.



3339.—A Dainty Dress For Growing Girl.—Patterns come in 4 sizes: 6, 8, 10 and 12 years. It requires 3⅝ yards of 36-inch material for a 10-year size. Batiste, voile, dotted Swiss, organdy, gingham and other wash fabrics, also silk, crepe, and cloth are attractive for this style. Pattern, 10 cents.

3328.—Good School Dress. — The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. A 12-year size will require 3½ yards of 44-inch material. As shown in this illustration plaid brown and blue gingham was used with facings of white drill embroidered in blue floss. The closing is at the left side of the waist. Pattern, 10 cents.



3329.—Any Young Girl Will Like This Style.—The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. A 10-year size will require 4½ yards of 27-inch material. Challie bordered and embroidered materials, also gingham and chambray are good for this design. Pattern, 10 cents.

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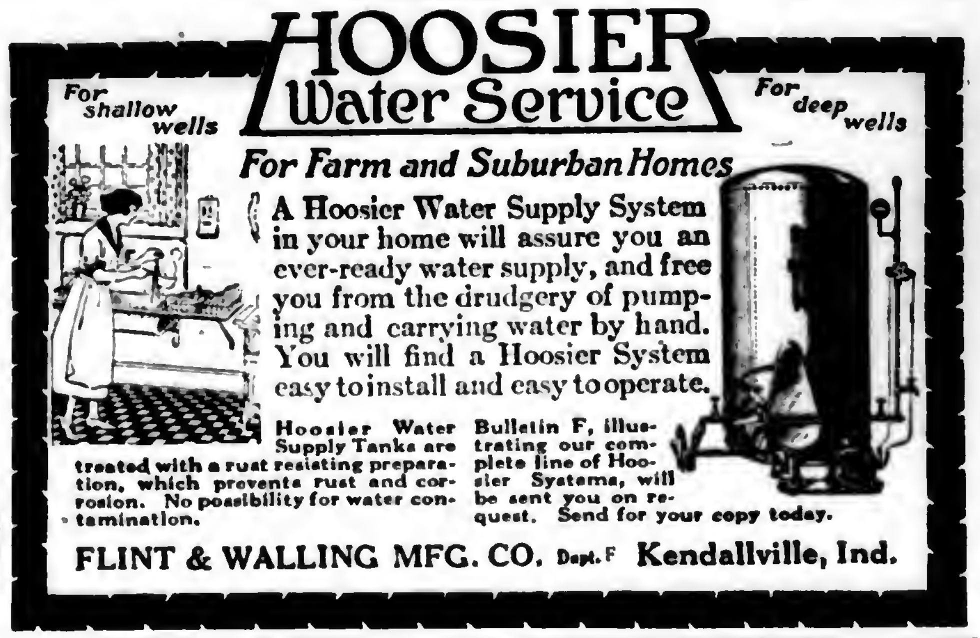

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The Fortress of the Farm

As the immigrant approaches the harbor of New York City his eye wanders at first to the heights of the sky-scrapers, then to the low irregular shore-line of New Jersey, then to Miss Liberty, standing with uplifted hand at the entrance to the New World; and finally to the fortifications half hidden in the sandy hills, keeping eternal vigil against the unfriendly visitor, and thus protecting the great city and the greater city beyond. In like manner stands the fortress of the farm.

I have used the military terminology not because I have any preferences for military usages and military forms, but because we commonly think of a fortress as a means of defense. If one speaks of an army or a navy, the hearer thinks of offensive warfare, but when one speaks of a fortress the hearer immediately thinks of defense. I want you to think of the farm as a means of defense against starvation. When we look round about us to the prevailing high prices, high wages, and the apparent general prosperity, it sounds rather silly to say that America is facing starvation. Perhaps there never was a time in our national history when every man had as much money as he possesses today. You will see more automobiles today than at any previous day in the history of the automobile. Our moving picture galleries are crowded at every performance. The supply of candies and of ice cream even at the excessive prices charged is not sufficient to meet the demand. It is a day of gross extravagance. And yet one dares to speak of starvation in the face of all this so-called prosperity.

The ominous facts that confront us are that farm labor is becoming scarcer and scarcer, and the amount of land out of cultivation is growing greater and greater. These two indisputable facts lead to but one conclusion, there is fast approaching a time when America's increasing population will face an insufficient food supply. Decreasing production of the primary necessity will lead to starvation.

It is suggested that this condition will ultimately correct itself. When the insufficiency of food is recognized by people in non-agricultural pursuits—people who have been lured to those pursuits by higher wages and shorter hours, by theatres and movies, etcetera—these people will be compelled to return to the land. There is no doubt that that statement is true; but have you ever stopped to think of the suffering that must come before these people are brought to the point of realizing all this?

Our chief problem, the thing that keeps us awake o' nights, is a matter of the education of our children, it is a matter of the possibility of culture and happiness for every man, woman and child in America. And that, fundamentally, is a matter of agricultural production. The greatest problem before us, therefore, is: Shall the farm be a fortress or a ruin?

I have said that the one big thing that must be prevented is a correction of present conditions of 'non-production by means of what I have called natural readjustment, and by this I mean a return to farm production by the pain of starvation. When people in other industries feel the pinch of hunger there will be a return, gradual, too gradual, I fear, to farming. That method of return must be prevented. And by whom can it be prevented? By whom, indeed, but by the farmer himself? How can the farmer prevent the ills of natural readjustment? By being unpopular. It is unpopular to be a "class."

There is a small class of men who use the farmer to secure the ends and aims of their class, who to put it frankly, pull the wool over the eyes of the farmer until after election by making vote-catching promises which are forgotten as soon as they have served their purpose. With such politicians and their henchmen the farmer must be unpopular if he is to prevent the danger of natural readjustment. He must be content to be called Bolshevik, for in these days of progressive reactionaryism anybody who holds a different opinion is a Bolshevik or some other hideous monster. The farmer unquestionably faces this distinction of unpopularity when he recognizes himself as a class.

It is very true that the doctrine of classism holds a grave danger for our country. But the presence of that danger depends upon two things: (1) The motive of the class, and (2) the permanency of the class-spirit. The peril of Communism and Syndicalism is that there is erected an impassable barrier between one class and other classes. That is to say; there is that in the organization which tends towards permanency. It is perilous to erect permanent barriers in our society. We must never forget our interdependence. But the permanency of the organization is decided by the motive of that organization. The motive that must move the farmer is suggested by the subject: The Fortress of the Farm. The farm must be a fortress against starvation. It must be a defense against the peril of natural redjustment.

What I have to say now may be said in a single sentence. All else is merely elaboration or explanation. The sentence is: The farmer must organize for consolidated effort. He must come to look upon himself as a class. For the sake of the whole group he must forget the whole group. To be unselfish he must be selfish. To save thousands from starvation, to shield millions from pain, he must be content to be the object of an unmerited and cruel criticism. He must insist upon a greater return from the proceeds of production to himself. Why is it that you cannot secure labor? Why is it that the mine or the factory can secure labor? Do men enjoy working under the unsanitary conditions inevitable in the base of mines tnd factories—the dust, the noise, the constant exertion, the absentee ownership, the ever-present fear of discharge, the danger of accident—do men enjoy this more than the broad fields, the pure air, the leisurely labor, the constant stimulation to mental effort, the almost complete absence of risk to life or limb, on the farm? Certainly not. It is the lure of high wages and short hours that tempt men away from the farm. The farm cannot compete with the mine or factory in its payment for labor? Why not? Because it does not receive its share of the rewards of production. How shall you regulate the necessary adjuncts to production and distribution? By governmental control alone. And that means consolidated political effort.—Rev. Theodore Darnell, Armstrong Co., Pa.

Firestone

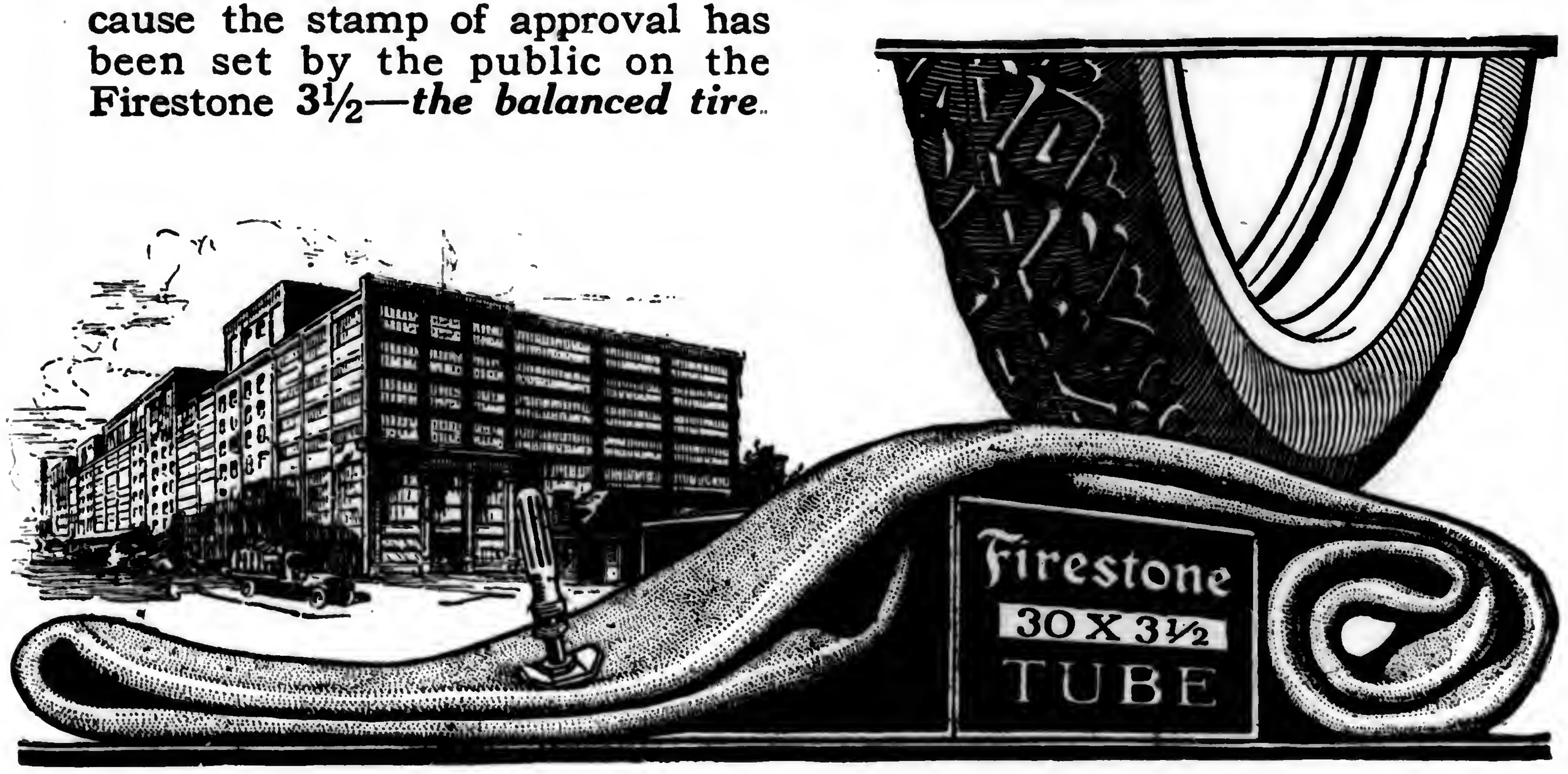
Buy a set of Firestone 3½-inch tires and discover the big feature behind their uniform service—perfect ***balance.***

Firestone has devoted eighteen years to developing the ***balanced*** tire, giving light car owners more mileage at low cost—most miles per dollar.

The answer to getting more service and more ***uniform*** service out of all four tires is the Firestone 3½. It is more than thickness of tread or amount of rubber and fabric, greater cushioning or greater air capacity. It is proper ***balance***—the way each of these component parts of a Firestone 3½ tire is made to co-ordinate.

Sales of this tire increased 96% for the first six months of this year. The result justifies the effort because the stamp of approval has been set by the public on the Firestone 3½—***the balanced tire.***

30x3½
(non-skid)
$22.50
Gray Tube $3.75
Red Tube $4.50



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Master Pipeless Furnace

is well constructed with the best of material and workmanship. Its heating principle is all that can be desired in a furnace allowing proper distribution of heat in every room at a right temperature.

The Master burns either coal or wood and has many good features not found in other furnaces.

Write for our free booklet describing the Master fully

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FISH BRAND Reflex Slicker

There is a FISH BRAND garment for every kind of wet work or sport

DEALERS EVERYWHERE

A.J. TOWER CO.
ESTABLISHED 1836
BOSTON MASS.

TOWER'S FISH BRAND

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Acme Farm Wagons Have Stood the Gaff for Years

These wagons were first put on the market by the present makers nearly 50 years ago and have improved with age. They are now equipped with steel, self oiling *National Tubular Axles.*

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ACME WAGON CO.
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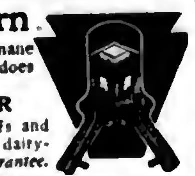

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Dehorn your cattle in the modern humane way. No crushing—a single stroke does the work quickly when you use a

KEYSTONE DEHORNER

We also make Keystone Bull Staffs and other appliances for cattlemen and dairymen—all sold on *money-back guarantee.* Write for circular. It pays to dehorn.

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Send us two subscriptions for 1, 2, 3 or 5 years and we will renew your subscription for a like period of time as a reward.

SUBSCRIPTION RATES:

One year, 75c. Two years, $1.25. Three years, $1.75. Five years, $2.25

PENNSYLVANIA FARMER, 261 South Third Street, Phila., Pa.

Eastern States Exposition

By W. H. TOMHAVE.

The third annual exposition held at Springfield, Mass., September 19th to 25th, was the largest exhibition of live stock ever held east of Chicago. This exposition was established in 1917, supported by a group of enterprising men from the New England States for the purpose of stimulating greater interest in live stock and agriculture throughout the eastern states. The live stock exhibits form the major part of the exposition, but other phases of agriculture are not neglected. Farm machinery, power apparatus and agricultural products formed an attractive display.

The Eastern States Exposition is built on the idea of a clean show. There are no "fakers" on the grounds to "fleece" the public out of their money with cheap trash of one kind or another. The cheap doll racks, games of chance and other objectionable amusements were not allowed on the grounds. The people who attended the exposition were interested in the exhibits, and came to study the classes of live stock and other exhibits, and take home a lesson that might be applied to the home farm.

Dormda Craighead, No. 47,689, a High Producing Ayrshire

Beef and Dairy Cattle.

A total of 890 head of beef and dairy cattle were on exhibition. The entries came from the best herds of the east and middle west. One herd of beef cattle and one of dairy cattle came from Missouri. The Hereford show was the strongest that has ever been staged east of Chicago, and by many regarded as the strongest show at any state fair this year. Herefords lead the beef classes in point of number and quality with a total of 124 head on the rounds. Aberdeen Anges were second in number, with Shorthorns third. The best display of milking Shorthorns ever assembled in America came before Mr. Attwater, of England, who came to the United States to judge these cattle. The cream of the Ayrshire cattle in America came together in the show ring. A finer display of aged cows have never confronted a judge in this country. Ayrshire and milking Shorthorn shared the honors with 150 head to represent each breed. The Jersey breed was represented by 125 entries of the best animals bred in this country, or imported from the Channel Islands. The Holstein and Guernsey breeds were represented by a show of quality, while the entries were not as large as the other dairy breeds. A small show of Devons and a well-balanced show of fat steers of the different breeds completed the cattle show.

Draft Horses.

A well-balanced list of entries representing the Percheron, Clydesdale and Belgian breeds made up the draft horse show. All of these entries came from the eastern states, which indicates the renewed interest in horse breeding throughout the east. In addition to the display of breeding horses, the National Biscuit Company exhibited a string of draft geldings, which were exhibited before the night horse show crowds, and the day crowd at the horse races as a six-horse hitch.

Swine Show.

The Eastern Berkshire Congress has been staged at Springfield during the past few years. The show this year fell short in numbers compared with last year, but the quality was up to the usual standard of this breed. A splendid show of Duroc Jersey, Poland China and Chester Whites made up the swine show. The entries seem small in numbers when compared with a middle western fair, but is a creditable showing for a far eastern fair.

Sheep Exhibit.

A strong show of Shropshire sheep was on display, representing the best flocks from New York and the New England States. Hampshires, Southdown, Dorsets, Cheviots and Merinos all made a fine show.

Live Stock Clubs.

The Eastern States Exposition management has taken an active interest in the work of the boys and girls of the eastern states. Camp Vail has been the home of more than three hundred boys and girls, the winners in the different feeding, judging and canning contests from

the ten northeastern states each year since the exposition was organized. This year these boys and girls had a splendid exhibit of calves, pigs and lambs. This work creates a great deal of interest among the contestants, and it will be only a short time until they will be the main exhibitors of live stock.

College Judging Contest

Two live stock judging contests were held this year—one for judging dairy catle and the other for judging beef cattle, sheep, swine and draft horses. Six colleges competed in the former and five in the latter. In the dairy judging contest, Connecticut won first, Massachusetts second, New Jersey third, Cornell fourth, Penn State fifth, and New Hampshire sixth. In the general contest Penn State won first, Massachusetts second, Connecticut third, Cornell fourth, and New Hampshire fifth.

SHEEP RAISING INCREASES AS RESULT OF DOG LAW.

While the protection of the sheep industry in Pennsylvania was only one of the primary reasons for the enactment of the Dog Law of 1917, yet the forward strides that this industry alone has shown since the law was passed, would be sufficient justification for its continued rigid enforcement.

In two years time the number of sheep grazing on the grasslands of the state increased by 60,308 heads, while the figures for 1920 will show an even larger percentage of increase, it is believed.

The Dog Law was passed in 1917 and no effort was made to enforce it until the following year. The following flures show the increase of the sheep growing during taht time and also the enormous losses inflicted by dogs in the state:

	No. of Sheep.	Killed or Injured by Dogs.
1917.	820,765	6,340
1918.	863,243	6,981
1919.	881,073	6,550

The various counties have paid out over $200,000 in the form of damages for sheep, poultry and live-stock losses brought about by dogs, during the past three years. With every county official and constable in the state insisting on a rigid enforcement of the Dog Act of 1917 this annual loss woult be almost entirely eliminated.

President Wilson has been enrolled in the "Better Sires—Better Stock" campaign. The sheep that graze the White House lawn are the President's personal property, and make him eligible for participation in the nation-wide effort to improve live stock in the United States.

"It is a mistaken idea that scrubs are more hearty that purbreds. Purebreds are hardy if only those are kept which are of good constitutional vigor.

"Breeds of livestock cannot be improved without the constant use of good sires. A good sire so impresses his characteristics upon his offspring that they are more like him than like the common herd."

Chester G. Starr, Tazewell County Farm Bureau, Pekin, Illinois, estimates that probably ninety per cent. of all farm-bureau members in that county use purebred sires.

The Verdict of Twelve Farmers

TWELVE representative farmers in various sections of the country, all owners of motor trucks, were asked what constituted the ideal truck for farm use. Based on their own experience, they agreed on the following essentials:

It should be of 1 to 2 tons capacity and strong enough to carry every load within that capacity, over any roadbed.

It should be simple in construction so that the average farmer can drive it and keep it in good running order.

It should be economical on gas, oil and tires, and require no excessive replacement of parts.

It should be equipped with pneumatic tires for traction in soft ground.

It should have a combination body of some kind suited for carrying any of the various loads peculiar to farm hauling.

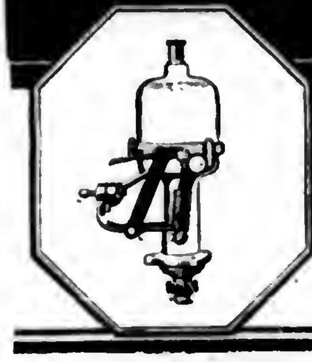
It should be built by a responsible company which is firmly established and not likely to go out of business.

It should be backed by a service organization in every locality where sold, capable of making quick, reliable repairs and of supplying ordinary parts on demand.

The Clydesdale truck does not fall short of the mark in any one respect. Because of this fact, it invites the careful investigation of every farmer who is interested in the purchase of a truck, regardless of price or reputation. A post card will bring you a thorough description of the Clydesdale and the name of your nearest dealer.

THE CLYDESDALE MOTOR TRUCK COMPANY
CLYDE, OHIO

CLYDESDALE
MOTOR • TRUCKS



"The Driver under the Hood"

—a patented feature used exclusively on the Clydesdale. This device controls the supply of gas to the carburetor, automatically keeping the truck at whatever speed may be set on the throttle. If the throttle is set for 10 miles per hour, the truck will maintain that speed, uphill or down, over rough or smooth road, whether the load is heavy or light, without further effort of the driver, except the shifting of gears when necessary.

USALYTE
A Twist of the Wrist
$2.25

A Twist of the Wrist—A Flood of Heat

USALYTE, the new heating invention, makes every gas-jet a furnace for chilly weather heating. No shoveling. No coal bills. A mere twist of the wrist!

New in principle, beautifully designed, safe, extraordinarily durable—Usalyte the Heating Marvel!

In two styles: for heating only or, with the new and exclusive in-built mantle, for heating and lighting.

With the mantle, for heating and lighting . . $2.25

For heating only, $1.75

Order from your dealer or direct from us. Take no inferior substitute. Dept. PA

J. I. ROBIN & SONS Inc.
MANUFACTURER OF THE FAMOUS USALYTE GAS MANTLES
130th to 131st St and PARK AVE.
New York City

SAY you saw the advertisement in Pennsylvania Farmer when you are writing to our advertisers.

Natco Hog Houses Help Save the Pigs

Build the farrowing houses of Natco Hollow Tile. The three hollow spaces filled with air in a Natco wall provide perfect insulation through which heat, cold or moisture will not pass. Thus Natco Hog Houses are warm in winter and cool in summer. Moisture does not condense on these walls as on other forms of masonry. And the smooth glazed surface of Natco walls is easy to disinfect—it affords no hiding-place for germs or vermin.

Natco Hog Houses soon pay for themselves in pigs saved. They cost almost nothing for upkeep—never need painting and seldom any repairs.

Write for our *free* book, "Natco on the farm."

Ask your building supply dealer to quote you on Natco Hollow Tile.

National Fire Proofing Company, 1093 Fulton Bldg., Pittsburgh, Pa.

Section showing foundation

Natco Hog House, L. R. Sabine, Gaithersburg, Md., owner

F-7

This is the Furnace That Will Keep You Warm

"The NOVELTY Pipeless Furnace is built to do just one thing and to do it with the least possible expenditure of effort and fuel—and that is to deliver HEAT in sufficient volume.

NOVELTY PIPELESS HEATER

"It is correct in principle. It is planned by heating engineers. It is built in a plant that has been making high-grade heating and cooking apparatus for 73 years.

"You didn't buy an experiment when you bought this NOVELTY Pipeless. All the necessary experimenting was done long before you ever heard the name.

In this unusual Furnace the firepot grate, heat travel and flue are correctly proportioned to each other.

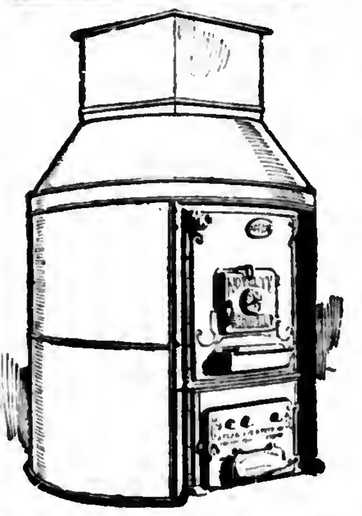
The grates are of open construction to permit a free draft—they are clinker proof and neither grate or fire pot have any ridges or projecting surfaces to gather ashes and cinders. Hence you are assured of a free burning and uniform fire.

The NOVELTY Pipeless will stand analysis. All iron parts are cast from Flex-o-tuf iron which takes up the disintegrating shocks of expansion and contraction—thus adding years to the life of the plant.

May We Send Circulars?

ABRAM COX STOVE COMPANY
AMERICAN & DAUPHIN STREETS PHILADELPHIA
Foundries: Philadelphia and Lansdale

Makers of NOVELTY Hot Water, Steam and Vapor System. Warm Air and Pipeless furnaces. Coal and Combination Ranges. Laundry Stoves and Hot Water Supply Boilers, FORTUNE Gas Ranges and Gas Water Heaters.



63 Acres $1600, With Cows, Horses, Tools, Crops

Near lively New York college city, conveniences all around, productive loam fields, 1[illegible]-cow spring-watered, wire-fenced pasture, 800 cords hardwood worth $2[illegible] cord nearby market; 30,000 ft. timber, good variety fruit; [illegible] cottage, basement barn, poultry house. [illegible] owner unable care for it, includes [illegible] harness, plow, harrow, cultivator [illegible] part cash, balance easy terms. Details this and farm with 4 horses, 21 cows, other equipment page 27 Strout's Big New Illustrated Catalog Farm Bargains 33 States. Just out. Copy free. STROUT FARM AGENCY, 1422 B E, Land Title Bldg., Philadelphia.

FOR SALE PEMBERTON VIEW FARM, to close an estate.
221 acres, adapted to grain, dairying, or truck. On stone road half mile from Pemberton, centre Burlington Co., N. J. Write
GEO. M. KIMBLE,
1916 Market Street, Philadelphia, Pa.

80 A. For $4,500

Coal mine, with about 60 A. coal. Fine location, good bldgs. Silo filled. All goes. Easy terms. Write for particulars and a free catalog of 600 Ohio farms.
H. H. MASTERS, Farm Agent, Cambridge, O.

All Size Farms, good soil for potatoes, grain, trucking; good houses and buildings; located in Middlesex, Monmouth, Mercer counties, the potato belt of N. J.
CLIFFORD G. BROWN,
CRANBURY STATION, Middlesex Co., N. J.

Bargains in Berkshires

Our [illegible] of the best breeding money can [illegible] Sequence 285329, a grand [illegible] out of large prolific granddaughters [illegible] Grand Leader 2nd. Nicely [illegible] pigs. Boars $10. Sows $12. Registered and transferred. Also one tried [illegible] 1 year old. This stock is sold to be as represented or money back.
T. B. MACK'SSIC, PARKER FORD, PA.

For Sale—[illegible] Lincoln, Tunis, and Shropshire sheep. Rams all ages. 1 year ewes. Ewe lambs.
L. R. KUNEY, ADRIAN, MICH.

Reg. Durocs Defender and Orion Cherry King breeding. Open gilts and boars ready for service. Selected individuals $35 and $40 each. Karl D. Shiner, Den-Moor Farm, Towanda, Pa.

BLACKSMITHS
WANTED: Two men, one competent blacksmith, [illegible] horse-shoer. Apply
SEABROOK FARMS CO., BRIDGETON, N. J.

HAY Ship to The Old Reliable House
DANIEL McCAFFREY'S SONS
623-25 Wabash Bldg., Pittsburgh, Pa.

Try This Stump Puller 30 Days FREE!

50A

Write for **New FREE Book!**

A Kirstin One-Man Stump Puller instantly gives you a GIANT'S POWER—makes you master of any stump! Many Kirstin owners pull stubbornest stumps in 4 to 10 minutes! AS CHEAP as 5 CENTS per stump!

Kirstin One Man Stump Puller

Just a few pounds on the handle means tons on the stump. When stump starts, throw machine into high speed and out comes the biggest stump, roots and all. Positively no other machine like it. Has special, patented features. Recommended by leading Agricultural Schools and Forestry Bureaus. Why have stumps when you can now pull them so easily, quickly and cheaply?

Six Months to Pay!

To prove these claims, we will ship you any size or style Kirstin on THIRTY DAYS' FREE TRIAL—not one penny in advance. If pleased, keep puller. If not pleased, return at our expense. You don't risk a penny. Four easy ways to pay.

Kirstin pullers at low prices. One-man style or HORSE POWER—all sizes. Three-year guarantee with each machine.

WRITE! Don't endure profit-losing, pesky stumps any longer. Send postal now for most valuable Stump Puller Book ever published—pictures—prices—terms—letters from Kirstin users and all about our Special Proposition—all Free. Write!

A. J. KIRSTIN CO., 5065 Lud St., Escanaba, Mich.

SAW YOUR WOOD

With a FOLDING SAWING MACHINE 9 CORDS by ONE MAN in 10 hours. Send for Free catalog No. E106 showing low price and latest improvements. First order secures agency.
Folding Sawing Mach. Co., 161 W. Harrison St., Chicago, Ill.

SAY you saw the advertisement in Pennsylvania Farmer when you are writing to our advertisers.

EAST SMITHFIELD CO-OPERATIVE CREAMERY

Bradford County, Penna.

About eight years ago, dairymen in the vicinity of the little village of East Smithfield, Bradford County, Pa., felt that they were being mistreated in their market for their dairy products.

Prominent dairymen of the community who were accepted as reputable leaders got together and outlined and organized a Co-operative Creamery which immediately received worthy support of a big majority of the dairymen of the territory surrounding this center. The results of the first year were such as to encourage confidence and support. Thus it has been for eight years and now there is little question but what the East Springfield Co-operative creamery stands as a living example of the possibilities of common requirements when met in co-operative management.

This Association during the past year produced 386,016 pounds of butter for which they received $246,167.49 or for the year, on an average, they paid out a little over $20,000.00 per month to their patrons.

East Smithfield, Pa. Co-Operative Creamery

The unusual feature of this association, which reflects creditably on the manager and their efficient creamery force, is the fact that they secure a return of a little over 20 percent and for the past year paid their patrons a little over 76 cents per pound for the butterfat delivered to their plant. The members have the use of their own skim milk, which is extensively used in the production of pork, poultry and good cattle.

This Association has a sinking fund of such an amount as to enable them to do business in a prudent manner and today this Co-operative Creamery is practically free from unpleasant and disgruntled patrons delivering milk to the plant.

The Association holds an Annual Picnic for its patrons where they get together and enjoy a day's outing and discuss matters of interest to their business and homes.

With the unsettled condition now prevailing with the whole milk market, many dairy communities could probably secure great satisfaction from a co-operative creamery to market their butterfat. With skim milk available as a by-product to be fed to good livestock, without question the net results would compare most favorably with the market usually shown in selling whole milk subject to city authority inspection.—D. K. Sloan, County Agent.

Schools Consolidate

It is estimated at the Department of Public Instruction that close to 100 mergers of schools have been affected this year in Pennsylvania and more are under way as the result of the activities of Dr. L. L. Driver, chief of the bureau of rural education. Dr. Driver has also been able to secure some assurances that mergers will be effected next year and in reports recently made calls attention to the fact that from two to four acres will surround new schools which it is proposed to build to obtain best results in rural districts.

Managers of East Springfield Co-Operative Creamery—F. R. West, C. P. Howland, E. G. Kingsley, A. W. Wood.

HOMESPUN YARN

Don't forget that the first [illegible] in table manners is to be on time at meals.

Don't envy a neighbor's display of flowers this year; resolve to have a better lot of your own next season.

A new method of canning vegetables uses 1 teaspoon of salt and 1 tablespoon of vinegar for each pint jar; then boil as with cold-pack method for 1½ hours.

Warm—watertight—cleaned in a minute: that's the "U. S." Walrus. It's just one model in the big "U. S." line of rubber footwear

A new kind of overshoe for farmers

The "U. S." Walrus: watertight as a rubber boot—as warm and easy to slip on as an arctic

THE combination you have always needed—something to keep your feet dry and warm and yet easy to slip on and off! Here it is—the new U. S. Walrus.

This new overshoe slips on and off easily over your leather shoes. Its warm, fleecy lining keeps your feet comfortable in the coldest weather. And its smooth rubber surface can be washed off as quickly and cleanly as a boot.

The comfort and convenience of this new overshoe are backed by real strength. Made by the oldest and largest rubber manufacturer in the world, the U. S. Walrus is built for the roughest wear. Its sole consists of five layers of the finest rubber. All other points where the strain comes are reinforced.

Ask your dealer to show you the U. S. Walrus. After you've worn them you'll realize why farmers everywhere are buying them.

Other types of "U. S." footwear—built for rough service

U. S. Boots have the wear and comfort which the accumulated improvements of 74 years have given them.

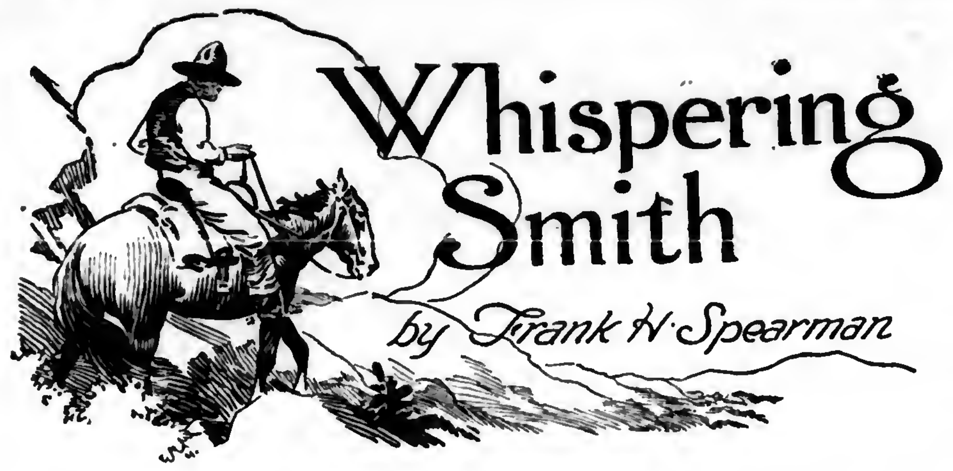
U. S. Bootees lace on over the sock like a leather shoe. You can wear them all day long in the wettest weather. Your feet will stay dry and comfortable.

There is a U. S. model for every need—arctics, rubbers, "overs." Every one has been designed by experts—every one is backed by over half a century of experience. Always look for the U. S. Seal—it means solid wear and long service for your money.

"U. S." Boots—are made in all sizes and styles—Hip, Half Hip and Knee. In red, black and white

United States Rubber Company

Look for this seal on all "U. S." Footwear



Whispering Smith

by Frank H. Spearman

(Continued from Last Week)

CHAPTER XXXIII

The Laugh of a Woman

nothing for some time, but once she laughed peculiarly. He pricked up his ears. "What has been happening since I left town?"

"What do you mean?" asked Marion Sinclair.

He nodded toward the porch. "McCloud and Dicksie out there. They have been fixing things up."

"Nonsense! What do you mean?"

"I mean they are engaged."

"Never in the world!"

"I may be slow in reading a trail," said Smith modestly, "but when a woman laughs like that I think there's something doing. Don't you believe it? Call them in and ask them. You won't? Well, I will. Take them in separate rooms. You ask her and I'll ask him."

In spite of Marion's protests the two were brought in. "I am required by Mr. Smith to ask you a very silly question, Dicksie," said Marion, taking her into the living-room. "Answer yes or no. Are you engaged to anybody?"

"What a question! Why, no!"

"Marion Sinclair wants to know just one thing, George," said Whispering Smith to McCloud after he had taken him into the dark shop. "She feels she ought to know because she is in a way Dicksie's chaperone, you know, and she feels that you are willing she should know. I don't want to be too serious, but answer yes or no. Are you engaged to Dicksie?"

"Why, yes. I——"

"That's all; go back to the porch," directed Whispering Smith. McCloud obeyed orders.

Marion, alone in the living-room, was waiting for the inquisitor, and her face wore a look of triumph. "You are not such a mind-reader after all, are you? I told you they weren't."

"I told you they were," contended Whispering Smith.

"She says they are not," insisted Marion.

"He says they are," returned Whispering Smith. "And, what's more, I'll bet my saddle against the shop they are. I could be mistaken in anything but that laugh."

CHAPTER XXXIV

A Midnight Visit

The lights, but one, were out. McCloud and Whispering Smith had gone, and Marion was locking up the house for the night, when she was halted by a knock at the shop door. It was a summons that she thought she knew, but the last in the world that she wanted to hear or to answer. Dicksie had gone to the bedroom, and standing between the portieres that curtained the workroom from the shop, Marion in the half-light listened, hesitating whether to ignore or to answer the midnight intruder. But experience, and bitter experience, had taught her there was only one way to meet that particular summons, and that was to act, whether at noon or at midnight, without fear. She waited until the knocking had been twice repeated, turned up the light, and going to the door drew the bolt; Sinclair stood before her, and she drew back for him to enter. "Dicksie Dunning is with me tonight," said Marion, with her hand on the latch, "and we shall have to talk here."

Sinclair took off his hat. "I knew you had company," he returned in the low, gentle tone that Marion knew very well, "so I came late. And I heard tonight, for the first time, that this railroad crowd is after me—God knows why; but they have to earn their salary somehow. I want to keep out of trouble if I can. I won't kill if they don't force me to it. They've scared nearly all my men away from the ranch already; one crippled-up cowboy is all I have got to help me look after the cattle. But I won't quarrel with them, Marion, if I can get away from here peaceably, so I've come to talk it over once more with you. I'm going away and I want you to go with me; I've got enough to keep us as well as the best of them and as long as we live. You've given me a good lesson. I needed it, girlie—"

"Don't call me that!"

He laughed kindly. "Why, that's what it used to be; that's what I want it to be again. I don't blame you. You're worth all the women I ever knew, Marion. I've learned to appreciate some few things in the lonely months I've spent up on the Frenchman; but I've felt while I was there as if I were working for both of us. I've got a buyer in sight now for the cattle and the land. I'm ready to clean up and say good-by to trouble—all I want is for you to give me the one chance I've asked for and go along."

They stood facing each other under the dim light. She listened intently to every word, though in her terror she might not have heard or understood all of them. One thing she did very clearly understand, and that was why he had come and what he wanted. To that she held her mind tenaciously, and for that she shaped her answer. "I cannot go you—now or ever."

He waited a moment. "We always got along, Marion, when I behaved myself."

"I hope you always will behave yourself; but I could no more go with you than I could make myself again what I was years ago, Murray. I wish you nothing but good; but our ways parted long ago."

"Stop and think a minute, Marion. I offer you more and offer it more honestly than I ever offered it before, because I know myself better. I am alone in the world—strong, and better able to care for you than I was when I undertook to —"

"I have never complained."

"That's what makes me more anxious to show you now that I can and will do what's right."

"Oh, you multiply words! It is too late for you to be here. You are in danger, you say; for the love of Heaven, leave me and go away!"

"You know me, Marion, when my mind is made up. I won't leave without you." He leaned with one hand against the ribbon showcase. "If you don't want to go I will stay right here and pay off the scores I owe. Two men here have stirred this country up too long, anyway. I don't care much how soon anybody gets me after I round them up. But tonight I felt like this: you and I started out life together, and we ought to live it out or die together, whether it's tonight, Marion, or twenty years from tonight."

"If you want to kill me tonight, I have no resistance to make."

Sinclair sat down on a low counter-stool, and, bending forward, held his head between his hands. "It oughn't all to end here. I know you, and I know you want to do what's right. I couldn't kill you without killing myself; you know that." He straightened up slowly. "Here!" He slipped his revolver from his hip-holster and held the grip of the gun toward her. "Use it on me if you want to. It is your chance to end everything; it may save several lives if you do. I won't leave McCloud here to crow over me, and, by God, I won't leave you here for Whispering Smith! I'll settle with him anyhow. Take the pistol! What are you afraid of? Take it! Use it! I don't want to live without you. If you make me do it, you're to blame for the consequences."

She stood with wide-open eyes, but uttered no word.

"You won't touch it—then you care a little for me yet," he murmured.

"No! Do not say so. But I will not do murder."

"Think about the other, then. Go with me and everything will be all right. I will come back some evening soon for my answer. And until then, if those two men have any use for life, let them keep in the clear. I heard tonight that Du Sang is killed. Do you know whether it is true?"

"It is true."

An oath half escaping showed how the confirmation cut him. "And Whispering Smith got away! It is Du Sang's own fault; I told him to keep out of that trap. I stay in the open; and I'm not Du Sang. I'll choose my own ground for the finish when they want it with me, and when I go I'll take company—I'll promise you that. Good-night, Marion. Will you shake hands?"

"No."

"I like your grit, girl! Well, good-night, anyway."

She closed the door. She had even strength enough to bolt it before his footsteps died away. She put out the light and felt her way blindly back to the work-room. She staggered through it, clutching at the curtains, and fell in the darkness into Dicksie's arms.

"Marion dear, don't speak," Dicksie whispered. "I heard everything. Oh, Marion!" she cried, suddenly conscious of the inertness of the burden in her arms. "Oh, what shall I do?"

Moved by fright to her utmost strength, Dicksie drew the unconscious woman back to her room and managed to lay her on the bed. Marion opened her eyes a few minutes later to see the lights burning, to hear the telephone bell ringing, and to find Dicksie on the edge of the bed beside her.

"Oh, Marion, thank Heaven, you are reviving! I have been frightened to death. Don't mind the telephone; it is Mr. McCloud. I didn't know what to do, so I telephoned him."

"But you had better answer him," said Marion faintly. The telephone bell was ringing wildly.

"Oh, no! he can wait. How are you, dear? I don't wonder you were frightened to death. Marion, he means to kill us—every one!"

"No, Dicksie. He will kill me and kill himself; that is where it will end. Dicksie, do answer the telephone. What are you thinking of? Mr. McCloud will be at the door in five minutes. Do you want him in the street tonight?"

Dicksie fled to the telephone, and an excited conference over the wire closed in seeming reassurance at both ends. By that time Marion had regained her steadiness, but she could not talk of what had passed. At times, as the two lay together in the darkness, Marion spoke, but it was not to be answered. "I do not know," she murmured once wearily. "Perhaps I am doing wrong; perhaps I ought to go with him. I wish, oh, I wish I knew what I ought to do!"

CHAPTER XXXV

The Call

Beyond receiving reports from Kennedy and Banks, who in the interval rode into town and rode out again on their separate and silent ways, Whispering Smith for two days seemed to do nothing. Yet instinct keener than silence kept the people of Medicine Bend on edge during those two days, and when President Bucks's car came in on the evening of the second day, the town knew from current rumors that Banks had gone to the Frenchman ranch with a warrant on a serious charge for Sinclair. In the president's car Bucks and McCloud, after a late dinner, were joined by Whispering Smith, and the president heard the first connected story of the events of the fortnight that had passed. Bucks made no comment until he had heard everything. "And they rode Sinclair's horses," he said in conclusion.

"Sinclair's horses," returned Whispering Smith, "and they are all accounted for. One horse supplied by Rebstock was shot where they crossed Stampede Creek. It had given out and they had a fresh horse in the willows, for they shot the scrub half a mile up one of the canyons near the crossing. The magpies attracted my attention to it. A piece of skin a foot square had been cut out of the flank."

"You got there before the birds."

"It was about an even thing," said Smith. "Anyway, we were there in time to see the horse."

"And Sinclair was away from the ranch from Saturday noon till Sunday night?"

"A rancher living over on Stampede Creek saw the five men when they crossed Saturday afternoon. The fellow was scared and lied to me about it, but he told Wickwire who they were."

"Now, who is Wickwire?" asked Bucks.

"You ought to remember Wickwire, George," remarked Whispering Smith, turning to McCloud. "You haven't forgotten the Smoky Creek wreck? Do you remember the tramp who had his legs crushed and lay in the sun

all morning? You put him in your car and sent him down here to the railroad hospital and Barnhardt took care of him. That was Wickwire. Not a bad fellow, either; he can talk pretty straight and shoot pretty straight. How do I know? Because he has told me the story and I've seen him shoot. There, you see, is one friend that you never reckoned on. He used to be a cowboy, and I got him a job working for Sinclair on the Frenchman; he has worked at Dunning's and other places on the Crawling Stone. He hates Sinclair with a deadly hatred for some reason. Just lately Wickwire set up for himself on Little Crawling Stone."

"I have noticed that fellow's ranch," remarked McCloud.

"I couldn't leave him at Sinclair's," continued Whispering Smith frankly. "The fellow was on my mind all the time. I felt certain he would kill Sinclair or get killed if he stayed there. And then, when I took him away they sprang Tower W on me! That is the price, not of having a conscience, for I haven't any, but of listening to the voice that echoes where my conscience used to be," said the railroad man, moving uneasily in his chair.

Bucks broke the ash from his cigar into the tray on the table. "You are restless tonight, Gordon—and it isn't like you, either."

"It is in the air. There has been a dead calm for two days. Something is due to happen tonight. I wish I could hear from Banks; he started with the papers for Sinclair's yesterday while I went to Oroville to sweat Karg. Blood-poisonin has set in and it is rather important to us to get a confession. There's a horse! He stepped to the window. "Coming fast, too. Now, I wonder—no, he's gone by."

Five minutes later a messenger came to the car from the Wickiup with word that Kennedy was looking for Whispering Smith. Bucks, McCloud, and Smith left the car together and walked up to McCloud's office.

Kennedy, sitting on the edge of the table, was tapping his leg nervously with a ruler. "Bad news, Gordon."

"Not from Ed Banks?"

"Sinclair got him this morning."

Whispering Smith sat down. "Go on."

"Banks and I picked up Wickwire on the Crawling Stone early, and we rode over to the Frenchman. Wickwire said Sinclair had been up at Williams Cache the day before, and he didn't think he was home. Of course I knew the Cache was watched and he wouldn't be there long, so Ed asked me to stay in the cottonwoods and watch the creek for him. He and Wickwire couldn't find anybody home when they got to the ranch-house and they rode down the corral together to look over the horses."

Whispering Smith's hand fell helplessly on the table. "Rode down together! For God's sake, why didn't one of them stay at the house?"

"Sinclair rode out from behind the barn and hit Wickwire in the arm before they saw him. Banks turned and opened on him, and Wickwire ducked for the creek. Sinclair put a soft bullet through Banks's shoulder—tore it pretty bad, Gordon—and made his get-away before Wickwire and I could reach the barn again. I got Ed on his horse and back to Oroville for a doctor. After Banks fell out of the saddle and was helpless Sinclair talked to him before I camp up. 'You ought to have kept out of this, Ed,' he said. 'This is a railroad fight. Why didn't they send the head of their own gang after me?'—naming you." Kennedy nodded toward Whispering Smith.

"Naming me."

"Banks, says, 'I'm sheriff of this county, and will be a long time yet!' I took the papers from his breast pocket," continued Kennedy. "You can see where he was hit." Kennedy laid the sheriff's packet on the table. Bucks drew his chair forward and, with his cigar between his fingers, picked the packet up and opened it. Kennedy went on: "Ed told Sinclair if he couldn't land him himself that he knew a man who could and would before he was a week older. He meant you, Gordon, and the last thing Ed told me was that he wanted you to serve the papers on Sinclair."

A silence fell on the company. One of the documents passing under Buck's hand caught his eye and he opened it. It was the warrant for Sinclair. He read it without comment, folded it, and, looking at Whispering Smith, pushed it toward him. "Then, this, I guess, Gordon, belongs to you."

Starting from a revery, Whispering Smith reached for the warrant. He looked for a moment at the blood-stained caption. "Yes," he said, "this, I guess, belongs to me."

CHAPTER XXXVI

Duty

The stir of the town over the shooting of Banks seemed to Marion, in her distress, to point an accusing finger at her. The disgrace of what she had felt herself powerless to prevent now weighed on her mind, and she asked herself whether, after all, the responsibility of this murder was not upon her. Even putting aside this painful doubt, she bore the name of the man who had savagely defied accountability and now, it seemed to her, was dragging her with him through the slough of blood and dishonor into which he had plunged.

The wretched thought would return that had she listened to him, had she consented to get away, this outbreak might have been prevented. And what horror might not another day bring—what lives still closer to her life be taken? For herself she cared less; but she knew that Sinclair, now that he had begun, would not stop. In whichever way her thoughts turned, wretchedness was upon them, and the day went in one of those despairing and indecisive battles that each one within his own heart must fight at times with heaviness and doubt.

McCloud called her over the telephone in the afternoon to say that he was going West on the evening train and would not be over for supper. She wished he could have come, for her loneliness began to be insupportable.

Toward sunset she put on her hat and started for the post-office. In the meantime, Dicksie, at home, had called McCloud up and told him she was coming down for the night. He immediately cancelled his plans for going West, and when Marion returned at dusk she found him with Dicksie at the cottage. The three had supper. Afterward Dicksie and McCloud went out for a walk, and Marion was alone in the house when the shop door opened and Whispering Smith walked in. It was dusk.

"Don't light the lamps, Marion," he said; sitting down on a counter-stool as he took off his hat. "I want to talk to you just a minute, if you don't mind. You know what has happened. I am called on now to go after Sinclair. I have tried to avoid it, but my hand has been forced. Today I've been placing horses. I am going to ride tonight with the warrant. I have given him a start of twenty-four hours, hoping he may get out of the country. To stay here means only death to him in the end, and, what is worse, the killing of more and innocent men. But he won't leave the country; do you think he will?"

"Oh, I do not know! I am afraid he will not."

"I do not think I have ever hesitated before at any call of this kind; nor at what such a call will probably sometime mean; but this man I have known since we were boys."

"If I had never seen him!"

"That brings up another point that has been worrying me all day. I could not help knowing what you had to go through in this country. It is a tough country for any woman. Your people and mine were always close together and I have felt bound to do what I could to—"

"Don't be afraid to say it—make my path easier."

"Something like that, though there's been little real doing. What this situation in which Sinclair is now placed may still mean to you I do not know, but I would not add a straw to the weight of your troubles. I came tonight to ask a plain question. If he doesn't leave the country I have got to meet him. You know what, in all human probability, that will mean. From such a meeting only one of us can come back. Which shall it be?"

"I'm afraid I don't understand you—do you ask me this question? How can I know which it shall be? What is it you mean?"

"I mean I will not take his life in a fight—if it comes to that—if you would rather he should come back."

A sob almost refused an answer to him. "How can you ask me so terrible a question?"

"It is a question that means a good deal to me, of course, and I don't know just what it means to you; that is the point I am up against. I may have no choice in the matter, but I must decide what to try to do if I have one. Am I to remember first that he is your husband?"

There was a silence. "What shall I say—what can I say? God help me, how am I to answer a question like that?"

"How am I to answer it?"

Her voice was low and pitiful when her answer came: "You must do your duty."

"What is my duty then? To serve the paper that has been given to me, I know—but not necessarily to defend my life at the price of his. The play of a chance lies in deciding that; I can keep the chance or give it away; that is for you to say. Or take the question of duty again. You are alone and your friends few. Haven't I any duty toward you, perhaps? I don't know a woman's heart. I used to think I did, but I don't. My duty to this company that I work for is only the duty of a servant. If I go, another takes my place; it means nothing except taking one name off the pay-roll and putting another on. Whatever he may have done, this man is your husband; if his death would cause you a pang, it shall not be laid at my door. We ought to understand each other on that point fairly before I start tonight."

"Can you ask me whether you ought not to take every means to defend your [illegible] life? or whether any consideration ought to come before that? I think not. I should be a wicked woman if I were to wish evil to him, wretched as he has made me. I am a wretched woman, whichever way I turn. But I should be less than human if I could say that to me your death would not be a cruel, cruel blow."

There was a moment of silence. "Dicksie understood you to say that you were in doubt as to whether you ought to go away with him when he asked you to go. That is why I was unsettled in my mind."

"The only reason why I doubted was that I thought by going I might save better lives than mine. I could willingly give up my life to do that. But to stain it by going back to such a man—God help me!"

"I think I understand. If the unfortunate should happen before I come back I hope only this: that you will not hate me because I am the man on whom the responsibility has fallen. I haven't sought it. And if I should not come back at all, it is only—good-by."

He saw her clasp her hands convulsively. "I will not say it! I will pray on my knees that you do come back."

"Good-night, Marion. Some one is at the cottage door."

"It is probably Mr. McCloud and Dicksie. I will let them in."

CHAPTER XXXVII

Wickwire

McCloud and Dicksie met them at the porch door. Marion, unnerved, went directly to her room. Whispering Smith stopped to speak to Dicksie and McCloud interposed. 'Bob Scott telephoned the office just now he had a man from Oroville who wanted to see you right away, Gordon," said he. "I told him to send him over here. It is Wickwire."

"Wickwire," repeated Whispering Smith. "Wickwire has no business here that I know of; no doubt it is something I ought to know of. And, by the way, you ought to see this man," he said, turning again to Dicksie. "If McCloud tells the story right, Wickwire is a sort of protege of yours, Miss Dicksie, though neither of you seems to have known it. He is the tramp cowboy who was smashed up in the Wreck at Smoky Creek. He is not a bad man, but whiskey, you know, beats some decent men." A footstep fell on the porch. "There he comes now, I reckon. Shall I let him in a minute?"

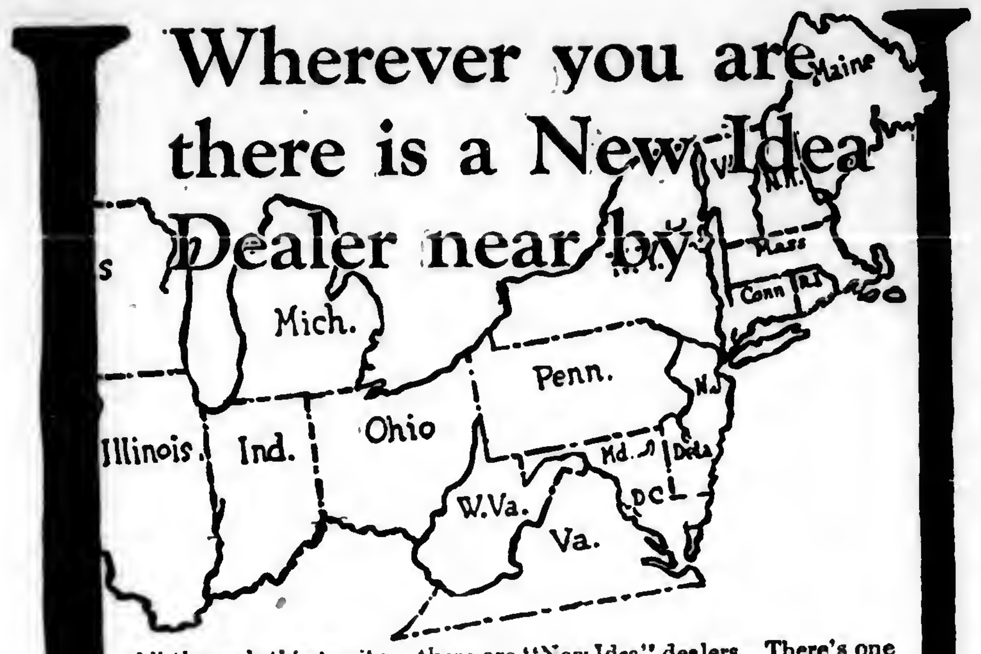
"Oh, I should like to see him! He has been at the ranch at different times, you know."

Smith opened the door and stepping out on the porch, talked with the newcomer. In a moment he brought him in. Dicksie had seated herself on the sofa, McCloud stood in the doorway of the dining-room, and Whispering Smith laid one arm on the table as he sat down beside it with his face above the dark shade of the lamp. Before him stood Wickwire. The half-light threw him up tall and dark, but it showed the heavy shock of black hair falling over his forehead, and the broad, thin face of a mountain man.

"He has just been telling me that Seagrue is loose," Whispering Smith explained pleasantly. "Who turned the trick, Wickwire?"

(Continued Next Week.)

Understanding is a well spring of life unto him that hath it: but the instruction of fools is folly.—Proverbs 16:22



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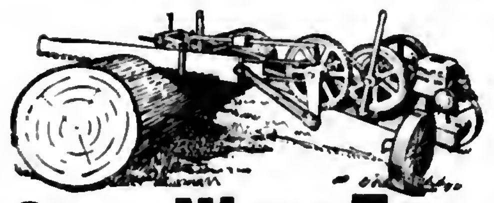

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ROOFING FOR FARM BUILDINGS

The roofing of the many buildings needed on the farm is a most serious proposition. The first consideration of course, is durability, and for all large and permanent buildings slate seems to be the best material. But it requires care and skill in laying, else snow will drift in. Under sheathing with building paper has not been very satisfactory. The upper courses and the sides and eaves should be nailed with No. 8 nails, if soft wood lathing is used, to prevent the wind from tearing them off. Lead washers should be used with all exposed nails. The greatest objection to slate and metallic roofs is that, unless sheathed, the attics are so hot in summer.

Good heavy tin will last, in valleys, about as long as the ordinary shingle roof, but with slate or tile it is true economy to use copper, as the repair of valleys is difficult and expensive. Good, smooth sawed chestnut shingles, or cedar, the only shingles available here will last from 25 to 30 years, but the price has advanced from $8 to $14 a thousand. These average 4 inches wide and are laid 7 inches to the weather so a thousand will cover about one square. On account of the acid, it is best to use cut nails in all chestnut wood, as the steel nails corrode much sooner.

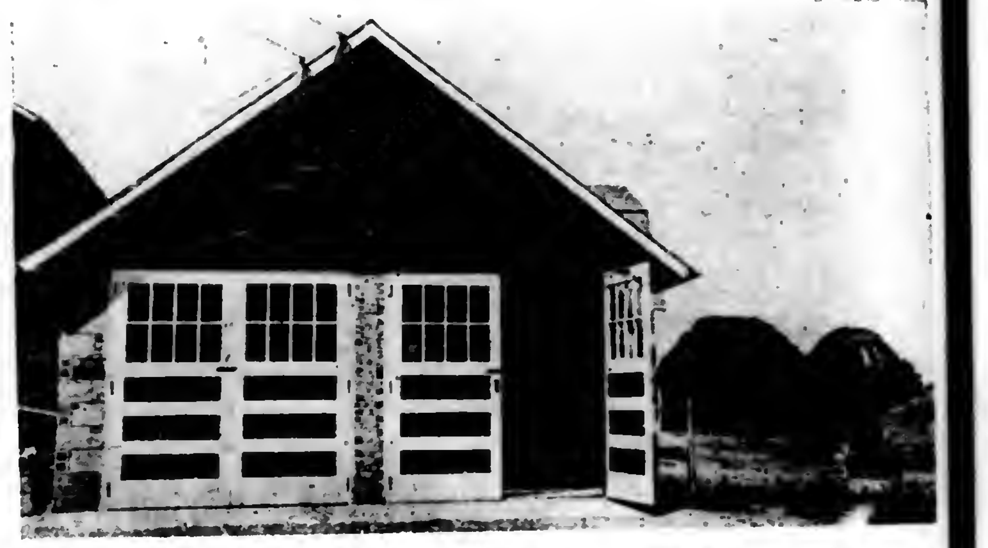
We have used tarred paper for chicken houses and sheds, but found that unless laid on matched boards, the wind entering at windows and doors, soon shredded it. We use metallic roofing on small buildings only. It can be used to advantage where sufficient pitch for shingles is not available. But moisture will condense in drops on the under side and form a little rust, then a little more moisture and a little more rust, and in time the roof is full of holes from below. When laid on building paper it lasted longer. We painted the under side with a metallic paint, but in time the paint checked. We could not keep the moisture from getting in at the eaves. But as we used the cheaper grades our experience may not be valualbe. Ash covered with No. 1 material where we could not use shingles, seems to give good service. Zinc used in valleys corroded out sooner than tin.—Chas. A. Umoselle, Atlantic Co., N. J.

THE FARM GARAGE

The fire risk is much reduced when the automobile is kept in a garage separate from the other farm buildings. The garage also furnishes a storage place for the oils and tools that are needed in keeping the machine in trim. If these necessities are handy where they can always be found, it results in the machine receiving better care.

An auto garage helps in keeping the car clean. The farm buildings are more or less dusty. Cars stored in open sheds on the farm are exposed to sparrows. Even the farm poultry may decide to roost on the automobile. The car in the closed garage is protected from dust and other dirt and this not only increases the pleasure of owning an automobile but extends the usefulness of the machine.

The auto garage can be neatly constructed of material that will match the other farm buildings. This adds to the real estate value of a farm. It pays to build a substantial cement foundation. Garages made of cement blocks are very satisfactory. A double garage if often desirable on the farm even if only one car is owned. Later the farmer may wish to own a truck or convert the old pleasure car into a truck and buy another family car. Then the double garage is ready to furnish adequate protection. Hollow tile blocks make attractive farm garages.—R. G. Kirby, Mich.



A Well Constructed Farm Garage

NEW JERSEY BOYS AND GIRLS WIN PRIZES

A team of club boys from Warren County, New Jersey, won first in dairy judging among teams from the 10 eastern states at the Eastern States Expoition at Sprinfield during the week of September 19 to 25.

Joseph Schwanda, of Beatyestown, proved highest man in all-round dairy judging and Harry Ackerman, of Belvidere, won out against all his competitors in judging Ayrshires. Each victor has been awarded a purebred registered Ayrshire calf.

Beside the two prizes, New Jersey, which was represented by a total of 21 club delegates, won 23 medals, the second highest number won in any state. Massachusetts which had three times as many representatives won the highest number with 27 medals and prizes.

Second place in canning judging, second place in canning demonstrations, second place in sewing judging and second place in poultry demonstrations—and some of them close seconds at that—complete a record to make club members, leaders and parents justly proud of what New Jersey's rising generation can do.

Collective bargaining not based on sound knowledge of real needs and circumstances is likely to be of the same type as that used by three holdup men who act together because one is afraid to do the job alone.

To sterilize jars for canning place them side down in the vessel and cover them with cold water; bring the water to boiling point and hold it there for 15 minutes. Jars sterilized in this way are not likely to be broken by the heat.

REPLY TO "A FARMER"

In reply to A Farmer I do not see any chance for him to purchase a farm at this time with only a flivver and one thousand dollars cash, because it would take all the cash and more to purchase stock and tools. Besides living expenses. If the Farm Loan Banks were doing business there would be some chance for him, but with the Farm Loan Banks inactive and all other banks refusing credit to farmers, there is no chance as I can see for him except to work a farm on shares.

The writer has two farms to take care of. If a farmer would furnish one good team and harness I would furnish house, barn and garden, lend him one-half in seeds, furnish wood and all tools from a hand rake to a tractor and go two to three with any good farmer. I would furnish all the lime and one-half of fertilizers and one-half of seeds and all the grass seeds. Farmer would not be obliged to pay for anything but team harness, groceries and clothing until crops are gathered. This would give him a chance to pick up second hand tools or get new ones. After he gets stock and tools and has one thousands dollars he could purchase a farm and make good. My advice is: Do not try to purchase a farm now. If you do you will drop you one thousand before you get started. You would have to spread that one thousand too far to cover all you require to get going. I have seen this done before so be careful.—L. U. B., Tioga Co., N. Y.

N. B. F. O. RESOLUTIONS

The following are among the resolutions adopted by the National Board of Farm Organizations at its recent meeting in Columbus, Ohio:

Packer Propaganda—Through an insidious and apparently very effective campaign directed and financed by members of the Institute of American Packers, the public mind has been diverted from what was a year ago an evident and determined purpose to compel this great aggregation of commercial interests to submit to reasonable regulation.

If the public mind is farther confused by the skillful packer propaganda so well directed from the large centers of population we fear that all the good work done by those who would protect the people from unjust or oppressive actions by the members of the Institute of American Packers will prove to be wasted energy.

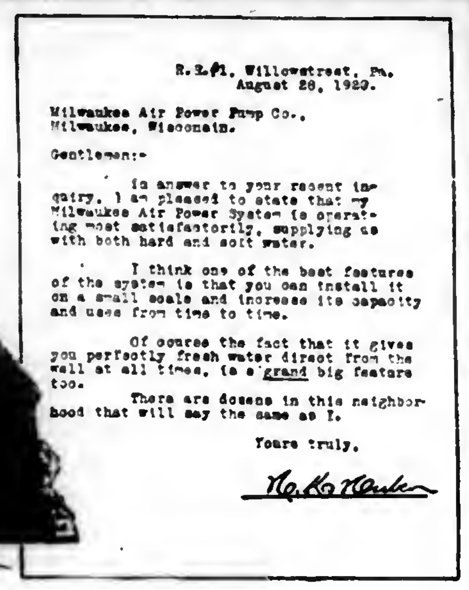
Therefore, we urge that Congress take such action as will regulate the packing interests of the country, and we insist that the Administration take such steps as may be necessary to co-operate with Congress in bringing about such regulation.

Free Speech, Free Press and Peaceable Assemblage.—We favor the repealing of laws restricting the rights of free speech, free press and peaceable assemblage, and we pledge the restoration to the people of these fundamental rights.

Compulsory Military Training—We are opposed to any form of compulsory military training in time of peace.

Taxation—We favor the support of graduated income and excessive profit taxes, supplemented by a graduated inheritance tax to furnish the additional revenue needed to meet the cost of war.

The high cost of living has been so well advertised that some people are ashamed to admit they're living within their incomes.



R.D.#1, Willowstreet, Pa.
August 28, 1920.

Milwaukee Air Power Pump Co.,
Milwaukee, Wisconsin.

Gentlemen:-

In answer to your recent inquiry, I am pleased to state that my Milwaukee Air Power System is operating most satisfactorily, supplying us with both hard and soft water.

I think one of the best features of the system is that you can install it on a small scale and increase its capacity and uses from time to time.

Of course the fact that it gives you perfectly fresh water direct from the well at all times, is a grand big feature too.

There are dozens in this neighborhood that will say the same as I.

Yours truly,

"Install on Small Scale, Increase Later"
—is the feature Mr. Huber likes especially

Different users like, particularly, different features of Milwaukee Air Power Water and Light Systems. As a rule the feature which impresses them most is the one which enabled them to overcome the particular handicap which seemed to stand in the way of their installing a system.
But *all* of them—to a man—are enthusiastic about the *Expert* who was responsible for their discovering that this feature existed and would overcome their handicaps.
Near *you* there is an *Expert*—our representative—able to cope with all water and light problems. He will help you without charge. Let us send you his name and address—and our literature.

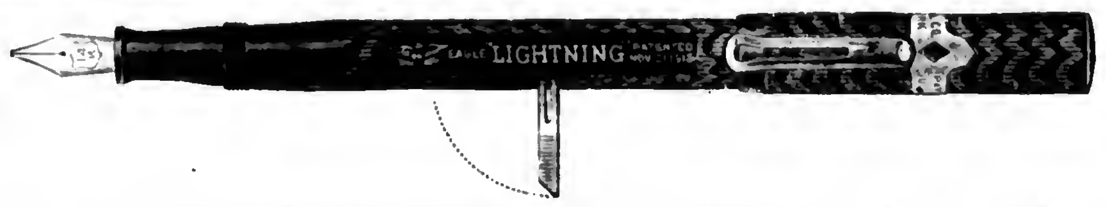
Milwaukee Air Power Pump Co.
869 Third Street, Milwaukee, Wis.

Milwaukee
Air Power WATER LIGHT Systems

Ask the Expert
He lives near you. He'll give you the kind of advice and help you want — without charge

Those Barrel Laces you need—
Scarce? Yes!—but we've managed to obtain a supply for our customers' convenience. This is a big apple year, why not get the best prices for your fruit? The barrel lace—many growers claim—
earns you 50c more a barrel at a cost of a penny or so.
It gives a neater, more impressive appearance—stamps "Quality" on your apples. Makes sales easier, in both domestic and export market. Our lace—of high-grade, durable white bond—displays, we believe, the most attractive, decorative design yet offered.
We can supply you NOW
and as long as our stock lasts. Safest to write us promptly for price on lots of 100 or above.
Our book, "Service to Fruit Growers," also is sent free upon your request.
FRUIT GROWERS SUPPLY CO.
Incorporated
65 BARCLAY ST. NEW YORK

500-Shot "Daisy" Air Rifle
We will send this Air Rifle, all charges prepaid, for 5 yearly subscriptions at 75 cents each; or with a single subscription and $2.00 extra.
The Daisy Air Rifle is a repeater, lever action, magazine holds 500 light rifle shot. Automatic retainer prevents shot from rolling out of barrel. 31½ inches long. Nickle plated barrel, walnut stock. An ideal rifle for target practice.
PENNSYLVANIA FARMER, 261 South Third Street, Phila., Pa.



Self-Filling Fountain Pen
Here is a Fountain Pen that not only will give long service but will meet with your approval in every respect. If found unsatisfactory, return it and we will send another to replace it.
This Self-Filling Fountain Pen will be given for a club of 3 subscriptions for the balance of this year and all of next or to Jan. 1, 1922 at 75 cents each, or with a single subscription and $1.10 additional.
PENNSYLVANIA FARMER 261 S. 3rd St., Philadelphia, Pa.

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The most popular work and play garment in America.

The millions of Americans who are wearing LEE UNION-ALLS insist on the trade-mark not merely because of the great comfort and convenience of these nationally famous garments but because they reduce substantially the high cost of living.

They're not Union-Alls Unless they're Lee

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The H. D. Lee Mercantile Co.
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Kansas City, Kas. Trenton, N. J.
Minneapolis, Minn. Chicago, Ill.
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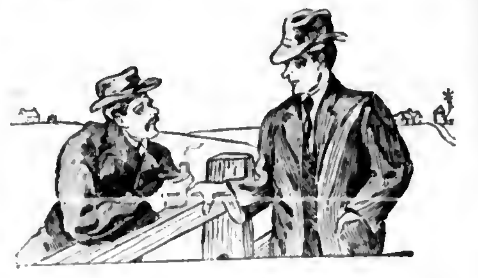
"Just Like Dad's!"

Neighborly Talks, No. 11



THE NEIGHBOR WE DISLIKE

When we wander around in the Field of Dislike we need to walk carefully lest we be engulfed in the Morass of Prejudice. Some of us are naturally very strong in our likes and dislikes. I am getting to a point where, when I find that I dislike a certain person, and the dislike is growing, I stop and ask myself this question: "Is there any good and sufficient reason for this dislike? Is it simply prejudice or is there the best of foundation for this feeling?"

Many times we dislike people because we fail to understand them. Their thoughts and motives are hidden from us; we see only the things on the surface—possibly only their blunders and mistakes—while their deeper longings and truer feelings, and the beauty of soul that is ever striving to overrule their lives, is not apparent to our blinded eyes. Many times we have an experience like this: We are slightly acquainted with a person and we dislike him. Then some change occurs and we are associated with him continually. Every day new vistas are opening to us of the real life of this man. Every day we understand him better and know what his life really means, and what he stands for. Little by little our blind eyes are opened to the real beauty of his character, and then our dislike vanishes like dew before the morning sun, and we discover that our dislike was really prejudice and was without foundation or reason.

Remember that we must like very imperfect people, or we will not like anyone. Remember that some people must like us, with all our imperfections, or we would have no friends. Imperfect people should have a fellow feeling for imperfect people. You remember the old proverb: "People who live in glass houses should not throw stones." We often dislike people for no other reason than because their ways and methods are different from ours. Many of us get pretty deeply into ruts, and we dislike changes and innovations, and want no old landmarks removed.

It is our duty to dislike sin, but to love people—even the unlovely. We call people hard and cold, and then when we really come to know them we find underneath the cold exterior, hearts that beat warm with love for their fellowmen.

If men would boss themselves they would be free of all other bosses.

Like those who order near-beer, folks who fail to vote have no kick coming.

Whats' become of the cyclists that used to be arrested for "scorching?"

A mans' getting old when it hurts him to tie his shoe laces.

After a man is married he begins to put the big bills on the inside of his roll.

Most sermons are not as broad as they are long.

GENUINE ASPIRIN

BAYER

Name "Bayer" identifies genuine Aspirin introduced to physicians in 1900. Insist on unbroken packages of

BAYER-TABLETS of ASPIRIN

Aspirin is the trade mark of Bayer Manufacture of Monoaceticacidester of Salicylicacid

For sale, the big type Flemish Giants, also high class New Zealand Reds; and R. R. Belgian Hares, Guinea Pigs, Ferrets, Pigeons, White Mice and Rats. Thoroughbred ... a specialty. ... Write for prices. 10c for booklet.
MOHAWK RABBITRY, Dep't. O. Indianapolis, Ind.

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"Reo" Cluster Metal Shingles, V-Crimp, Corrugated, Standing Seam, Painted or Galvanized Roofings, Sidings, Wallboard, Paints, etc., direct to you at Rock-Bottom Factory Prices. Positively greatest offer ever made. At Factory Prices.

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cost less; outlast three ordinary roofs. No painting or repairs. Guaranteed rot, fire, rust, lightning proof.

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Lowest prices on Ready-Made Fire-Proof Steel Garages. Set up any place. Send postal for Garage Book, showing styles.
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LET US TAN YOUR HIDE.

Horse or Cow hide, Calf or other skins with hair or fur on, and make them into coats (for men and women), robes, rugs or gloves when so ordered. Your fur goods will cost you less than to buy them and be worth more.

Our illustrated catalog gives a lot of information. It tells how to take off and care for hides; how and when we pay the freight both ways; about our safe dyeing process on cow and horse hide, calf and other skins; about the fur goods and game trophies we sell, taxidermy, etc.

Then we have recently got out another we call our Fashion book, wholly devoted to fashion plates of muffs, neckwear and other fine fur garments, with prices; also fur garments remodeled and repaired.

You can have either book by sending your correct address naming which, or both books if you need both. Address

The Crosby Frisian Fur Company, 571 Lyell Ave., Rochester, N. Y.

SAY you saw the advertisement in Pennsylvania Farmer when you are writing to our advertisers.

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Seeds grow faster and mature into healthy grain when first freed from smuts by using *Formaldehyde*. This powerful disinfectant also destroys all grain rust and fungus growth.

FORMALDEHYDE
The Farmer's Friend

Now used throughout the world by scientific farmers and has the supreme endorsement of the U. S. Dep't of Agriculture. Your dealer will supply you with *Formaldehyde* from our laboratories. One pint bottle treats 40 bushels of seed grain. Write for new illustrated Hand Book today. Of great value and FREE.

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HIGH-GRADE NEW YORK STABLE MANURE
Carload shipments on Pennsylvania and ... Railroads.
Acme Stable Manure Co.
PHILADELPHIA OFFICE, 1918 MARKET STREET

PASSING EVENTS IN PICTURES

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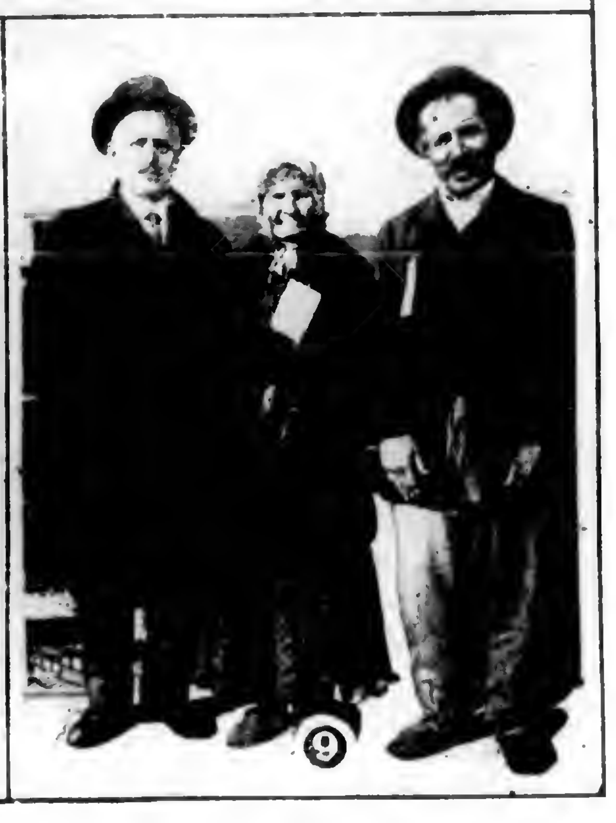
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Photos Copyright by Underwood & Underwood

1—A great Pyramid of Salt at San Fernando, Spain.

2—M. De Leon presiding at the Session of the League of Nations at San Sebastian, Spain

3—The principal business street of Buenos Ayres, Argentine Republic.

4—Tender-hearted youngster trying to revive a Star Fish.

5—Fishing on Broadway—for money, not fish.

6—Elizabeth Melamede showing on new fashions she has just bought in Paris.

7—Monument to Nurse Edith Cavell, dedicated by Queen Elizabeth at Brussels.

8—Monkey adopts orphaned puppy at Golden Gate Park.

9—A mother and her two sons, all foreign-born. Which son has been Americanized?

COST OF OPERATING AUTOMOBILE

In operating a four-cylinder touring car from March 10th, 1919, to October 15th, 1919, I find that the record kept of the operating costs reveals some interest facts. In order that these facts may be intelligently discussed, the items of cost are shown in the following table:

Mileage for 7 months	5,136
Interest	$44.10
Repairs	56.87
Gasoline (284 gallons)	76.68
Oil (41 quarts)	9.74
Tires	94.16
Miscellaneous	17.25
	$298.80

Interest is figured at 6 per cent. on $735.00, the cost of the car. Repairs include such charges as are generally grouped under this head. Gasoline cost 27 cents per gallon; while a high-grade cylinder oil was used and adhered to costing 95 cents per gallon.

The car was operated over dirt, gravel and macadam roads for about three-fourths of its mileage and over mountain roads the balance of the time. The car had run 3248 miles before this record was taken.

From the table it will be seen that the item of tires is the largest single expense in operating the car, as it amounts to .0183 dollars or 1 5-8 cents per mile. Tire costs include casings, tubes and repairs to same. Non-skid tires of a well-known make, ranking second in point of cost to any fabric tires made, were used on both front and rear wheels during the seven months under consideration. The average cost per mile for gasoline was .0149 dollars or 1½ cents per mile, making it next to tires in point of expense. As the car averaged 18.1 miles per gallon of gasoline over a long period with varying road and weather conditions, the only suggestion for increased mileage would be to use a little more care in throttling and to shut off the engine in descending hills.

The oil mileage is quite satisfactory, the car having made 125.3 miles per quart. This was obtained by using a high-grade of oil, keeping the oil level just above the first or upper pet cock on the crank case and keeping the gaskets on the engine in good condition. The cost per mile of but .00189 dollars or practically 1-5 cent is so low that no one can afford to use anything but the best grade of lubricant.

The above figures show a total cost per mile for tires, gasoline and oil of $0.0351 or 3½ cents at the Pennsylvania prices for gasoline and oil.

Repair expense may seem to be large, but as the car had already traveled 3,248 miles and all repair work was done thoroughly by high-priced mechanics, the figure is reasonable. Miscellaneous expense, or $17.25 includes washing, storage when away from home, tolls, etc.

From the foregoing it is shown that the total cost per mile, including every charge that should properly be made by the man who drives his own car and keeps it at home, is $0.0581 or 5 4-5 cents per mile.—Leonard F. Strickler.

IOWA'S 66TH STATE FAIR

Conditions that have long made Iowa State Fair one of the greatest livestock shows in the world have at last returned to pre-war basis. The exhibitions of livestock were bigger and better this year than they have ever been and the attendance has been unusually large.

The fair management have adopted some new features for their show which can well be copied by other fairs in all sections of the United States. They have done away with the cane racks, the doll stands and the other bally-ho stands that have no real place in an educational exhibit. No games of chance of any kind are permitted.

Children and "Rover" on the Fine Farm of T. T. Crossley, Chester Co., Pennsylvania

Another added feature is the setting aside of one day as Farm Bureau Day. It came on Monday of the fair and this day was the best in attendance of any Monday that the fair management ever knew. This will be a regular feature.

Each of the following had one day set apart for them: the American Legion, The Old Soldiers, Farm Bureau, Boys' and Girls' Club, Livestock parade, Auto Race Day with the Sunday intervening devoted to a musical programme.

There were 157 girls and boys exhibiting in the Boys' and Girls' Pig Club Contest; the leading breeds of hogs were used. There were also 91 boys and girls in the Baby Beef Club, who exhibited 132 Short-horn, Hereford and Aberdeen-Angus steers. In the county exhibit of pure bred beef heifers to be shown, 10 from a county, there were 31 boys and girls entered.

A very welcome feature of the livestock show is what is known as amateur classes, which is open only to those who have never shown their particular class of animals at a National or State show. It encourages the breeder to attend the State Fair.

Thursday, Sept. 2d, was known as live stock parade day and more than 700 of the prize winners paraded before the grand stand. The estimated value of the animals in this parade was $1,000,000, and when we find that there was several animals in the parade who had either sold for around $50,000 each or for which such prices have been offered it does not seem far over-estimated if any. Many of the finest specimens of the various breeds were shown. A special feature was the six-horse grey draft team of Springbrook Farm of Walkersville, Md., which were owned and exhibited by George M. Oyster, Jr.

Over 4000 head of swine representing the various well-known breeds were shown this year. Several hundred head of sheep filled the sheep sheds to overflowing. Every department was crowded to its full capacity. This live stock show is surpassed by only one live stock show in the country and taht is the International which is held at the Union Stock Yards, Chicago, Ill.

PRICE OF FARM PRODUCE SHOULD BE BASED ON A STANDARD DAY

I am glad to see the department, "Voice of the People" restored in the Pennsylvania Farmer, and was much interested in the articles of Leonard F. Strickler and W. Edwin Druckmiller in your issue of August 14th. Also in Woman Power Wasted, by E. M. A., issue of Aug. 28th. I am glad to hear the creaking wheels voicing their needs of economic justice. Would that all of them would raise their voices in a loud and prolonged din, that would compel our lawmakers to heed and apply the oil. The vote of the farmer and his wife, in the November elections will turn the spigot of the oil barrel in the proper direction, if only we arouse ourselves to our power and our duty.

I want to nationally popularize an idea that has become locally popular. We have with us an eight-hour day. Without arguing for or against this standard day, we must admit it is here to stay. Then, why not face the fact and see how it affects the farmer. Will we not have to admit that this city standard day has depleted the farm of male and female labor and driven the farmer himself, his children and his toil-worn wife from the farm to seek more remunerative, if less congenial, work in the city. I ask the farmer and his wife to elect in November a law-making body which will give the Secretary of Agriculture a sufficient appropriation to investigate and obtain authentic cost of all farm produce, based on the standard eight-hour day.

The Government, I understand, grants the farmer a wage rate of 30 cents per hour or less in making such investigations. Then we must see to it that when such costs are computed, that wide and official publicity be given both the cost of production and wage rate at which it was produced.

During the war and up to the present time, we farmers have been accused of the criminal charge of profiteering. Such official statistics would act to vindicate us and free us from that charge. It would also have a salutary effect of setting a just price on all our commdoities. The consumer in the city who receives from 60 cents to $3.00 per hour, should be shown with actual cost of production, facts why we cannot stay on the farm and work for nothing up to 30c per hour just to be philanthropic and supply hungry consumers with food at less than cost. We farmers have been asleep at the post of duty, while our city cousins have organized their strength and demanded a day's pay for a day's work. We have not only worked two days in one, but compelled the wife, the grandfather, the grandmother, the little children of tender years, and those older ones who should be in high school and college, to come to our assistance, and toil from 12 to 16 hours each day that we may keep a roof over our heads. Wake up farmers, we have too long side stepped duty. Demand this court of vindication! Demand authentic cost of production based on standard day. Then if you want to continue to work at 30c per hour that is your pleasure. But no man can call you profiteer in face of facts.—Joe Donahue.

THE SINGLE TAX PLAN

Editor of The Pennsylvania Farmer:

Your editorial "Not Partisan" should receive the endorsement of every reader of your paper, provided, in your advertisement of the different political party statements, you will permit free and fair criticism of such statements.

To do this would perhaps require more of your space than your "business" sense would permit, but, in the interests of truth and justice, and fair play to parties which cannot afford to pay for page advertisements, you should at least try to give all sides a chance. In a general way, assuming that the promises of the Republican party appearing on page 15-251, issue of Sept. 11th, were given in good faith and were possible of accomplishment, and, that the farmer's interests were to be looked after with all the wisdom and prudence of a great political party, what would it all result in, if no fundamental change in our treatment of the natural element of land be made?

The farmer's income or returns can easily be seen to come from the application of the human element of labor to the natural element of land, while it is not so easy to see that the raw materials, which go into the manufacture of the machinery and other things he has to buy, come from the same source and by the same method.

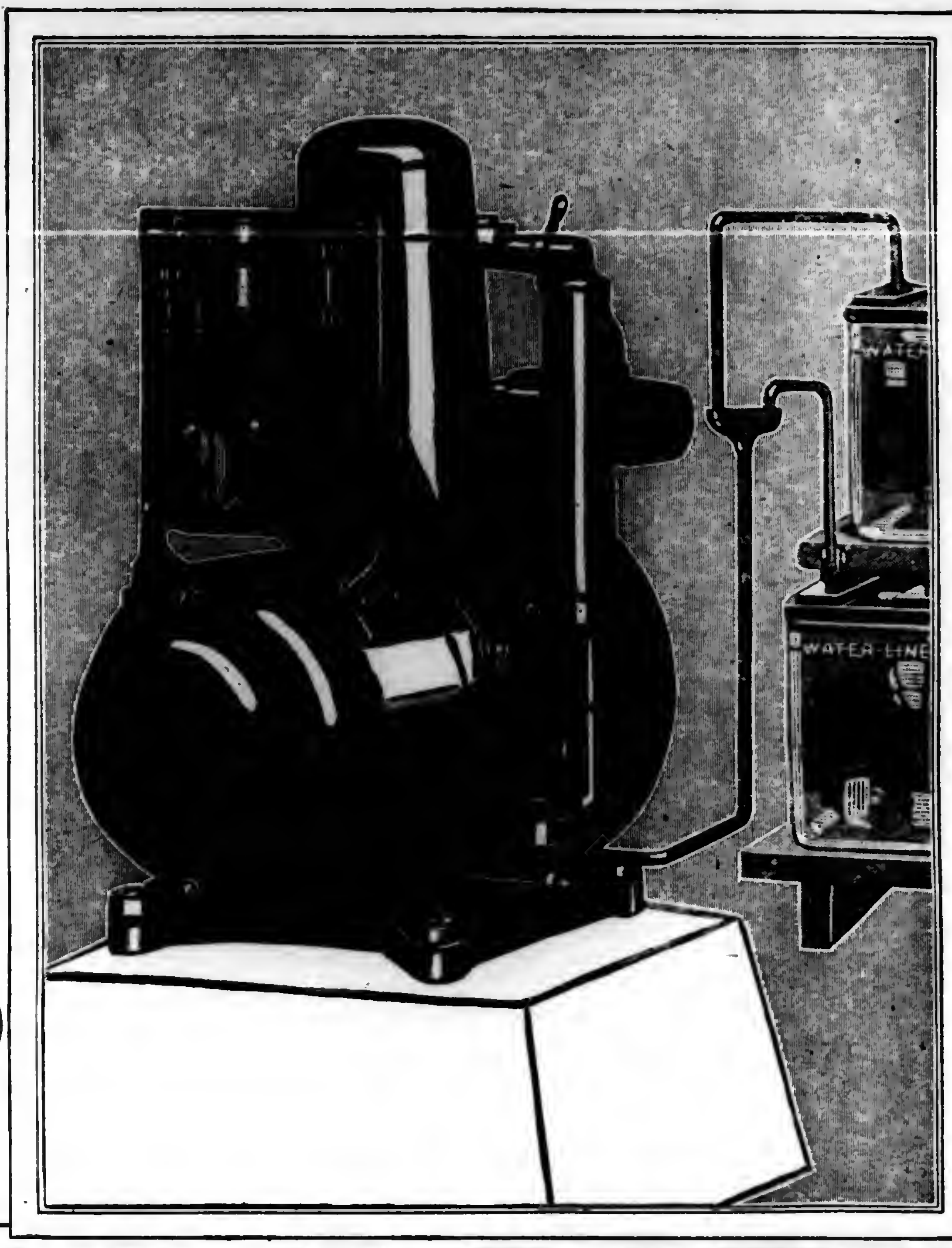
The Single Tax Party is pledged to make a fundamental change in our treatment of land, and, this change contemplated is meant to not only benefit the farming class, but all classes of producers. It would take the entire rent of land for public use and benefit, not merely because such a process would cheapen and simplify the cost and administration of government, but as a matter of justice and equity in the natural resources and advantages of earth—the "free gift of God to all His children."

It recognizes that rent of land is a vital element in the great force of production, and, that the payment of rent for the valuable portions of the earth's surface by producers is not only just, but necessary, to the best interests of the producing classes and the consumers of wealth, but is the only way by which it can be justly determined who shall use the more valuable portions of God's free gift.

It differs radically, however, from the prevailing opinion as to the collection and ownership of rent. Our present system allows rent to be privately appropriated by a small fraction of the population. This permits this small fraction to exact a tribute, much higher than legitimate rent, from producers—through making the right to produce a matter of profit to them and a discouraging obstacle to those who must use land to perform the various duties involved in supplying the world with the good things of life.

Bright, Clear Electric Light and a Happy, Contented Family

Free from Drudgery— Easier Times for Mother



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More Than Just a Machine

When you buy Delco-Light you buy more than just a machine.

You buy continuous electric light and power.

You buy Contentment, Satisfaction, Comfort—better living conditions—freedom from drudgery.

And—in the end you find that your purchase hasn't cost you anything at all. It has given you all these things and in addition has actually paid for itself in the time and labor it has saved.

In every nook and corner of the country you will find Satisfied Delco-Light Users—125,000 of them.

And—no matter where you live you will always find a Delco-Light Sales & Service man near you to guarantee the perfect installation and operation of your plant.

You buy *more* than just a machine—you buy a Delco-Light plant.

DELCO-LIGHT COMPANY, DAYTON, OHIO.

Markets

PHILADELPHIA PRODUCE

Oct. 11, 1920.

Under the very light supplies and a steady demand the potato market is firmer and higher. The great bulk of the supplies at this writing are coming from Penna. and N. J., with a few from N. Y., and an occasional car from Me. The N. J. stock is selling at $4.1[illegible]a4.25 per 150-lb. sack for Giants, and $3.50a3.75 per sack for the round stock such as Cobblers and Green Mountains. Best Penna. potatoes are coming from Chester and Lancaster Counties which are selling at $2.25a2.35 cwt., while those from Lehigh county are selling mostly at $2 a2.15 cwt. One car of N. Y. potatoes sold here this morning at $3.25 cwt., but they were a little small in size.

The potatoes hauled in by the nearby farmers are selling anywhere from 75ca$1.00 per ⅝ basket on No. 1 stock and from 40c a50c per ⅝-basket on No. 2 potatoes as to quality. Sweet potatoes are being supplied almost entirely by N. J., altho there are a few coming from the Eastern Shore sections. The N. J. stock is selling generally at 80c a$1.00 per ⅝ basket for prime yellows and [illegible] per ⅝-basket for prime Reds, with No. 2 and mediums selling at 40a60c per basket. The light supplies of Eastern Shore stock are selling around $3.50a4.25 per barrel.

Vegetables—Fancy green and wax beans are in light supply and wanted at $1a1.25 per ⅝ basket, while the poorer grades are moving more slowly at around 65a85c per ⅝-basket. Bunch beets remain about steady at 2½a3½c bunch, while the loose beets are unchanged at 75ca$1.00 hamper. Brussel sprouts are in good demand when fancy at [illegible] quart but some [illegible] very poor condition and such sell as low as 10c quart.

Cabbage from N. Y. state is more plentiful, there being about 23 cars here this morning with most sales ranging around $12a14 ton with a little up to $15. Nearby cabbage is bringing from 30a50c per ⅝ basket and around [illegible] load. Fancy carrots are firm and sell readily around 85ca$1 per ⅝-basket but some poor and small carrots move slowly around 65a75c basket. All cauliflower is now coming from L. I., and Buffalo, N. Y. sections. The L. I. stock sold here this morning at $[illegible] crate, while the Buffalo sold at $2.25a2.50 crate.

Celery is plentiful enough for the demand and moving rather slowly at 25a75c per bunch. Nearby celery hearts are selling around 4a7c bunch. Some Penna celery has been selling from 12a20c bunch. Corn is in good demand when fancy, some Penna selling here this morning at $2a2.50 per 100 ears, while N. J. ⅝ baskets ranged from [illegible] on poor up to 75a80c on good corn. The market is practically bare of cucumbers. Eggplants are also in light supply and firmer when fancy, selling generally at 30a65c basket as to condition.

Horseradish is very scarce and selling around $18.00a20 bbl. Lettuce is firm when fancy and [illegible] brings $2a2.50 box, but poor lettuce is hard to sell at any price some very poor selling here this morning at 25a50c box. Lima beans are a little easier than they were a week ago, with most sales now ranging from $3a4.50 hamper, and $1a3.50 L. I. bag, with prospects of still lower prices.

Onions are about steady at $1.75 per 100-lb. sack on good onions both white and yellow. Some Spanish onions sold at $4.00 case. Parsley is dull at the unchanged price of 1a2c bunch. Parsnips are more plentiful and lower with most sales ranging from 65a 75c per ⅝ basket. The market is bare of peas. Peppers are dull and weak, the green peppers selling slowly at 15a35c per ⅝-basket, with the reds at 40a60c, and the hot finger peppers at 50a75c basket. Radishes are [illegible] at 1a2½c bunch. Pumpkins are firmer and a little higher at 30a50c per ⅝ basket.

As the season for tomatoes is getting late and the stock mostly poor, the market is ruling a little easier. Some fair to good [illegible] $1.25 per ⅝ basket while the poor stock ranges down as to quality as low as 20c basket. There are a few green tomatoes on the market selling at 25c per ⅝ basket. Spinach is more plentiful and lower than it was a week ago, most spinach selling today at 40a50c per ⅝ basket. Turnips are stronger and higher. White turnips ranging from 40a50c per ⅝-basket and yellows including the Aberdeens at 65ca$1 per ⅝ basket. A little watercress is arriving and selling generally at around 3c bunch.

Fruits—The market on apples is ruling about steady. While supplies are not what might be termed heavy, at the same time they are fully equal to the demand at the prevailing prices, the range of values for the various varieties being about as follows: Baldwins, $3.50a4.50. Grimes Golden, $4a [illegible]. Rome Beauty, $4.50a[illegible]. Jonathans, $[illegible]. Gravenstein, $4a5. Pound Sweets, $2.50 a[illegible]. Kings, $4a5.50. York Imperials, $3.50 a[illegible]. Twenty Ounce, $3.50a6. Pippins, $3 a[illegible]. Other varieties, $[illegible]. Bushels: McIntosh, $1.50a2.25; Wolf River, $1.25a1.50. [illegible] Orange, $1.10a1.25. Maiden Blush, $1.10a1.50. Crabapples, $2.50a3.50.

The market was well supplied with peaches today, there being over 20 cars sold, and prices lower, ranging from $1a1.75 bushel. Plums are drawing to a close for this season. Damsons sold at $1.50a2 bushel, [illegible] and the Green Gage, 75ca$2.25 bushel. Grapes are also in heavy supply there being about 22 cars of N. Y. grapes here this morning and the large [illegible] or 12-quart baskets sold at $1.40 a1.50 on Concords and $1.25a1.35 on Niagaras. The small [illegible] baskets or 2 quart baskets sold at 22a25c on Concords and 22 a27c on Niagaras.

Pears are in good demand when fancy, the Bartletts selling at $2.50a3.50 bushel for No. 1 and $1.25a2.25 bushel for No. 2s. Seckel [illegible] $2.25 bushel and $[illegible]a3.50 keg. Other varieties of pears ranged from [illegible]. Quinces are in light supply [illegible] and $3 bushel. Cranberries are about steady at $2.50a3 crate and $7 [illegible] barrel. A few fresh figs are coming from the Eastern Shore sections and selling around 30a40c quart.

Poultry—The market on both live fowls and chickens is a little lower than it was a week ago, but rules firm at the revised quotations. At this writing fancy heavy fowls are selling at 40a41c pound with exceptional lots higher, while the light to medium fowls sell at 34a38c pound, and the Leghorns at 27a32c pound. Spring chickens are selling at 32a35c pound for the choice sizes while the common [illegible] lots only bring 29a 32c pound. Ducks are practically unchanged at 30a34c pound.

Eggs—The market is ruling very firm on strictly fancy fresh eggs with prices a little higher than were prevailing on this commodity in our last report. At this writing Penna. and other nearby current receipts are selling at 65c with firsts at 66 a67c, and ordinary to fair at 59a63c dozen. Strictly fancy carefully selected and graded and candled eggs are jobbing out at 77a78c dozen. Western firsts are quotable at 62a 64c dozen and western extra firsts at 65a 67c, with seconds at 52a57c.

LANCASTER PRODUCE

Oct. 9, 1920.

The market today was poorly attended and prices ranged unusually high for this time of the year. Every farmer asked 75 cents for eggs, the record price for this time of the year. Cider was plentiful and brought [illegible] and 60 cents a gallon, the highest price ever asked on a Lancaster market. Peaches were few. Corn was displayed in abundance with the very best ears selling at 25 cents a dozen. The quotations:

Butter and Eggs—Fresh eggs 75c per doz.; duck eggs, 68a70c per dozen; goose eggs, 6a7c each; country butter, 70a75c per lb.; creamery butter, 80c per pound.

Poultry—Dressed fowls, old, $2a2.25 ea.; broilers, 50ca$2 each.

Vegetables—Parsnips, 10c box; spinach, 15a20c per ½-peck; turnips, 40c ½-pk.; peppers, 2a3c ea.; cucumbers, 5c ea.; potatoes, 20c ½-pk.; $1a1.15 per bu.; sweet potatoes, 30a40c per ½-pk.; cabbage, 5a10c per head; cauliflower, 15a25c per head; lima beans, 25c pint; onions, 10c box; red beets, 5c bunch; peas, 30c ¼-pk.; rhubarb, 3a5c bunch; tomatoes, 20c ½-pk.; corn, 25c dozen.

Fruits—Peaches, $1.75a2.25 basket; 10a 15c qt. box; apples, 10a15c qt. box; pears, 20a30c ½-pk.; cantaloupes, 5a10c each; watermelons, 25a60c each.

NEW YORK PRODUCE

—Oct. 9, 1920.

Butter lower; receipts, 4154 tubs; creamery, higher than extras, 61½a62c; extra (92 score), 61c; first (88 to 91 score), 50a60c; packing stock, current make, No. 1, 39a 39½c.

Eggs steady; receipts, 7354 cases; fresh gathered, extra firsts, 66a68c; do, first, 62 a65c; state, Penna. and nearby western hennery white, first to extra, 87ca$1; do, brown, extra, 75a82c; do, gathered brown and mixed colors, first to extra, 62a70c.

Cheese unsettled; receipts, 1290 boxes; state, whole milk, flats, held, white and colored specials, 28½a29½c; do, average run, 27½a28c; state, whole milk, twins, held specials, 28¼a28½c; do, average run, 27½ a28c.

Potatoes—Bbl., Me., 180-lb., $3.25a4; L. I., bbl., $3.75a4.25; Jy., round, 165-lb., $3 a4; 150-lb., $2.50a3.50; Jy., long, 165-lb., $3.25a3.75; 150-lb., $3a3.25; No. 2, $1.50a 2. Sweets, Jersey 1s, bbl., $5a6; Jersey, 2s, bbl., $2.50a3.50; Jersey, 1s, bskt., $1.75a2; Jersey, 2s, bskt., $1a1.25; Md., bskt., $1.50 a1.75; brussels sprouts, 5a25c; beans, bskt., 50ca$2.50; beets, nearby, bbl., $2a2.50; carrots, nearby, 100, $2a4; corn, Jersey, 100, 50ca$2; celery, State, bunch., 15a65c; Jersey, bunch, 15a65c; cucumbers, bskt., $2a 4.50; cabbages, L. I., bbl., 50ca$1; Jersey, bbl., 50ca$1; red, bbl., $1a1.75; cauliflower, nearby, crate, $1a3.75; eggplant, Jersey, box, 50a75c; lima beans, Jersey, bskt., $2a3.50; L. I., bskt., $2a3.50; lettuce, Md., bskt., $2.50a3.50; state, bskt., 50ca$1.75; okra, Jersey, crate, $1.50a2.50; onions, state, wh., bskt., 75ca$1.75; yel., bskt., 75ca$1; red, bskt., 75ca$1.25; peppers, bbl., $1a2; pumpkins, cheese, $1.25a1.50; yankee, 50a75c; parsnips, bbl. or bag, $3a4; squash, Ital., basket, 50ca$1.50; hubbard, bbl., $1.50a2; marrow, bbl., $1.25a1.50; turnips, white, 100 bunches, $2a4; Rutabaga, bbl., $1a1.50; tomatoes, nearby, bush. box, $1a3.

Fresh Fruits—Apples, bskt., fancy, $1.50a 2; bskt., average, 60ca$1.25; bbl., fancy, $4.50a8; bbl., average, $2.50a4; boxes, $2.75 a5; crabapples, per bbl., $5a9; bush bskt., $2.75a3.25; pears, boxes, $2.75a3.25; baskets, $1.50a2.75; barrels, $3a9; peaches, state, Elb. st. fancy, $2; do, average, $1.50 a1.75; plums, state, 8-lb. bskt., 35a45c; grapes, state, del., crt., $1.25a1.75; cond., bskt., $1.45a1.50.

BALTIMORE PRODUCE

—Oct. 9, 1920.

Beans—Green, native, per bu., 90ca$1; stringless, do, per bu., 90ca$1; limas, Eastern Maryland, per bushel hamper, $2.50a 3; do, natives, per 4-8 bskt., $1.25a1.50; hulled, per lb., 18a20c. Beets, per bunch, 4a 4½c. Brocoli, native, per bu., 35a40c. Cabbage, as to quality, per 100, $4a5; New York domestic, per ton, $15a18. Cauliflower, Maryland, per bbl., $8a9; Long Island, per crt., $3.25a3.50. Celery, New York, washed, per bunch, 50a75c; do do, rough, per crate, $2a 4. Carrots, per bunch, 4a5c; New York, per 100-lb. sacks, $2. Corn, native, per doz., 6a 15c. Cucumbers, New York, per bu. hamper, $1.75a2.50. Eggplants, native, per basket, 35a40c. Lettuce, native, per bu. bskt., $1.50 a2.50; New York, per box or bskt., $1a2.50. Onions, Western Maryland and Penna., yellow, per 100 lbs., $1.25a1.50; Eastern Shore Maryland and Virginia, bulk, per lb., 1a1¼c; Western White, per 100 lbs., $1.75a2; do, white, per 100 lbs., $1.25a1.50. Oyster plants, native, per bunch, [illegible]. Peppers, native, per 4-8 bskt., 25a40c. Pumpkins, each, 5a10c. Spinach, native, per bu., 40a60c. Tomatoes, native, per 4-8 bskt., 25a50c; packing stock, per bu., 30a60c; small yellow, per 4-8 bskt., 50a60c.

Potatoes—No. 1 white potatoes are in fair demand and supplies not as large as the moment as they have been. Sweet and yams in ample supply, with inquiry mainly for choice to fancy stock. Quote: White, Maryland, Pennsylvania and nearby, per 100 lbs., $2; New Jersey, per 150-lb. sack, $2.50a3. Sweets, yellow, No. 1, per bbl., $3a3.50; yellow, Anne Arundel, per bbl., $3a3.50. Yams, fancy, bright, per bbl., $2.50.

YORK PRODUCE

—Oct. 9, 1920.

The attendance at the different markets has been up to normal. For the week of the York County Fair, it was even better than for many years. The coming of the fall is evidenced by the the scarcity of many kinds of produce already. Celery, apples, and tomatoes and corn are the principal products. Another sign of fall is the appearing of the farmer butcher, who usually starts the first week of October.

Eggs—70a75c dozen.

Butter, country, 65a70c lb.; separator, 75c lb.; milk, 14c qt.

Poultry—Hens, 26a30c lb.; springers, 32c lb.; dressed, $1a2 each.

Vegetables—Potatoes, 15a25c ½-pk.; $1a 1.40 bu.; cabbage, 5a10c head; lettuce, 5c head; beets, 5c bunch; radishes, 6c bunch; onions, 10c box; 20a25c ½-pk.; corn, 20a 40c doz.; peas, 25a30c ¼-pk.; beans, 15c ¼-pk.; lima beans, 40c qt.; peppers, 15a 20c doz.; eggplants, 5a10c ea.; squash, 5a each; lard, 28c lb.; hams, sliced, 45a80c lb.; whole, 40a45c lb.

Fruit—Apples, 10a40c ½-pk.; 75ca$2 bu.; 15c box; pears, 25a30c ½-pk.; peaches, 15 a20c box; $1.50a2 basket; tomatoes, 10a20c ¼-peck.

Retail Grain Market—Wheat, $2.50; corn, $2; oats, $1; rye, $1.75; bran, $3 cwt.; middlings, $4 cwt.

Wholesale Grain Market—Wheat, $2; corn, $1.25; oats, 75c; rye, $1.35; bran, $60 ton; middlings, $70 ton.

PITTSBURGH PRODUCE

—Oct. 9, 1920.

Butter—Prints, 67a67½c; tubs, 66½a67c; cooking, 55a56c; Ohio, 62½a63½c.

Cheese—New York full creams, 32a33c; Roquefort, $1a1.20; W. s. Swiss, 49a50c; do, 1-lb. brick, 31a32c; Swiss, 5-lb. block, 33 a34c; Phila. cream, doz., $1; Longhorns, 33c; Limburger, 1-lb., 33c; do, 2-lb., 32c.

Eggs—Fresh select, 67a68c; current receipts, 59a60c; storage, 57a58c.

Vegetables—Potatoes, Jer. Col., 150-lb. sack, $4a4.25; do giants, sack, $3.50a3.60; sweet potatoes, East Shore, bbl., $4.75a5; beans, wax and green, hamper, $1.75a2.00; do, lima, hamper $5; onions, Spanish, crate, $2a2.25; cabbage, h. g., bushel, 75a85c; green corn, h. g., bushel, $2a2.50; lettuce home grown, bskt., 50c; turnips, bu., $1.50 a2.00; tomatoes, home grown, bskt., 65c; eggplant, Marietta, hamper, $1.50a1.75; carrots, bu., $1.25a1.75; celery, bunch, 25a50c; peppers, hamper, 75ca$1; do red, bu., $1.75 a2; cauliflower, crate, $2.50a3.

Fruits—Apples, bu., $1a2.25; do barrel, $3.50a5; do crab, bu., $2.50a2.75; pears, Bartlett, N. Y., bush., $2.85a3; do Seckel, bush., $2.50a2.75; grapes, Concord, 8-lb. bskt., 38a42c.

PHILADELPHIA HAY AND GRAIN

—Oct. 9, 1920.

Baled Hay and Straw—Receipts, 168 tons of hay. In small supply and quiet at former rates. We quote: Timothy hay, No. 1, none here; No. 2, $31.00a32.00; No. 3, $27.00 a29.00; sample, $23a25; no grade, $18a21. Clover mixed hay, light mixed, $29a30; No. 1, mixed, $27a28. Straw—No. 1, straight rye, $20.50a21; No. 2, do, $19a19.50; No. 1 tangled rye, $17a18; No. 2, do, $16.50a17. No. 1 wheat straw, $16.50a17; No. 2, do, $16.

Bran—Dull at late decline. We quote: Car lots, including sacks, Soft winter bran, western, in 100-lb. sacks, per ton, $42a43; spring bran, in 100-lb. sacks, per ton, $41a42.

Corn—No. 1 yellow, $1.10a1.15.

Wheat—New; No. 2 red winter, $2.21a 2.26. No. 2 red winter, garlicky, $2.06a2.11.

Oats—No. 2 white, 64a65c; No. 3 white, 63a64c.

PITTSBURGH HAY AND GRAIN

—Oct. 11, 1920.

Receipts of hay are liberal and equal to demand. Trade only purchasing for their immediate wants, anticipating lower prices. Somewhat difficult to effect sales, **even at** the present prices. Market slightly depressed. Receipts of straw continue light on a medium demand. Arrivals bring quotations. Oats, ear corn and shelled corn are difficult to place at the present values. The **following prices can be realized: No. 1** timothy, $31.50a32; **standard timothy,** $28.50a29; **No. 2 timothy, $27a28; No. 3** timothy, $23a24; **No. 1 light clover mixed,** $28a29; **No. 1 clover mixed, $29a30; No. 1** oat straw, $17a17.50. No. 2 oat straw, $16.50 a17; No. 1 wheat straw, $16.50a17; No. 2 wheat straw, $16a16.50. No. 1 rye straw, $17 a17.50; No. 2 rye straw, $16.50a17; New No. 2 white oats, 61a61½c; new No. 3 white oats, 57½a58½c; No. 2 yellow ear corn, $1.20a1.23; No. 2 yellow shelled corn, $1.15 a1.16.

NEW YORK HAY AND GRAIN

—Oct. 9, 1920.

Feed—The market for mill feed was inactive and prices were weak. The demand was discouragingly poor and mills seem to have a good deal of feed on hand despite the fact that the production at the mills is much under other seasons when there was a bigger business in flour.

Quotations: City feed bran, $46; middling, $52, in 100-pound sacks; red dog, $80, nominal, in 100-pound sacks; Western, spring bran, $42; standard middling, $48; flour middling, $59.50; red dog, $76, all in 100 pound sacks, 30-day shipment. Oat feed, $21; rye middlings, $50; white hominy feed, $50, all in 100-pound sacks. Cottonseed oil meal, $58; [illegible] oil meal, $60, in 100-pound sacks.

Hay and Straw—Market conditions very quiet. There are liberal offerings at practically all harbor points and buyers hold the advantage on practically all grades, though there is **no further change in values today.** Rye straw holding barely steady. Oat straw nominal.

Hay—Large bales. Timothy, No. 1, $38a 39; No. 2, $35a37; No. 3, $31a33; shipping, $28a30; no grade, $18a25. Clover mixed, fancy, $35a37; No. 1, $32a34; No. 2, $27a 29; Straw, large bales, No. 1 rye, $25.50a26; No. 1, oat, $20.

LIVESTOCK MARKETS

PITTSBURGH

—Oct. 11, 1920.

Cattle—Receipts, 1800; higher, **steers**, $15 a15.50; heifers, $10.50a11.50; **cows**, $8a9.50. Hogs, receipts, 7500; lower, heavies and heavy yorkers, $17.15a17.25; light yorkers, $16.50a17; pigs, $16a16.50. Sheep and lambs, receipts, 5000; steady; top sheep, $8; top lambs, $14. Calves, receipts, 1000; top, $20.

LANCASTER

Cattle—Receipts, 2861 head; market fairly active; prices steady; steers, good to choice, $14a15; fair to good, $12.60a14; medium, $11.50a12.50; common, $9.50a11.50; fair to good bulls, $9a10.50; medium, $7.50 a9; common, $6a7.50; choice to prime heifers, $11.50a12.25; good to choice, $10a11.50; medium, $8.50a10; common, $5.50a8.50; good to choice coats, $8a10; medium, $6.50 a8; common, $5.75a6.50; canners and cutters, $4a5.75; good to choice feeding steers, $10.50a12; fair to good, $8.50a10.50; common, $6.50a8.50; good to choice stock steers, $9.25a10.75; fair to good, $7a9.27; common, $5a7; good to choice stock bulls, $8.25 a9.50; fair to good, $7a8.25; common to fair, $5a7; good to choice stock heifers, $8.50a 9.50; fair to good, $6.50a8.50; common, $5 a6.50; good to choice calves, $17a19; medium, $12a17; common, $5a12. Hogs, receipts, 473 head; market active; prices steady; best grade, $17.25a18.25; light weight, $16a17.25; roughs, $12a13.

PHILADELPHIA DAIRY MARKET

—Oct. 9, 1920.

Butter—Receipts, 1551 tubs. As usual on the last day of the week there was practically no wholesale trading and values were largely nominal. We quote: Fresh, solid-packed creamery, high-scoring goods, 65½a 67½c, the latter for jobbing sales; extra, 64½c; do, extra firsts, 60a63c; firsts, 52a 56c; seconds, 46a49c; sweet creamery, choice to fancy, 66½a68½c; fair to good, 53a 55½c; ladle packed, as to quality, 42a44c; packing stock, 37a40c; fancy brands of nearby prints were jobbing at 72a75c; good to choice, 64a71c; fair, 61a63c.

Cheese quiet and barely steady. We quote: New York, whole milk, current make, fancy flats, 28¾a29¼c; common to fair, 25a28c; Longhorns, 28½a29¼c; single Daisies, 28½ a29c; jobbing sales of fancy goods, 32a33c.

NEW YORK MILK MARKET

—Oct. 11, 1920.

Demand fell off somewhat last week and supply was more than enough. Surplus is heavy. The October rate in 200-mile zone is $3.65 per 100 lbs. for 3 per cent milk; 3.6 per cent milk is $3.89 and 4 per cent milk $4.05. Receipts of milk and cream in 40 quart cans for the week ending Oct. 9, 1920, were as follows:

Railroad.	Milk.	Cream.
Erie	40,189	4,378
Susquehanna	9,060	121
West Shore	15,110	1,877
Lackawanna	58,114	2,710
New York Central (long haul)	193,719	3,621
Ontario	47,992	2,016
Lehigh Valley	55,060	965
New Haven	6,900	80
Pennsylvania	12,875	510
Other sources	6,500	300
Totals	445,519	16,578
Same week last year	383,968	15,609

TOBACCO MARKET

—Oct. 11, 1920.

The tobacco farmer has abandoned his occupation for the time being and is now giving time to cutting corn and sowing wheat interspersed with a day or so of recreation. He knows he has grown and safely housed one of the best crops in his career. Altho the season was late the general conditions were good and in the latter favorable weeks the growing plants made due amends for earlier delays and since cutting all conditions for curing have been good.

Now the man who has grown an acre or less and the man who has grown hundreds of acres are alike deeply interested in the market outlook. Very few crops have been sold in the Pennsylvania section and as yet buyers have shown but little interest in the situation. The losses and troubles of early selling loom up before those who have the matter under consideration and it is well indeed that farmers make haste slowly in such an important matter.

Reports from the Hartford locality indicate that much of the Connecticut crop has been sold at what seems to be very fancy and unusual prices, ranging as high as $80 per cwt. In one locality the extra top was $85 per cwt. There was also marked demand for holding of last year's crop.

INTERSTATE MILK PRICES

—Oct. 9, 1920.

Philadelphia milk prices in effect for October are as follows: For three per cent milk, $4.20 per cwt., or basic quantity price per qt. of 9.1c. For 3.5 per cent milk, $4.[illegible] per cwt. or basic quantity price 9.6c per qt. For four per cent milk, $4.60 per cwt. or basic quantity price of 10c per qt. The [illegible] for surplus milk 3 per cent, $2.41 cwt; [illegible] per cent, $2.61 cwt; 4.0 per cent, $2.81 [illegible] at receiving stations. When milk is [illegible] to be [illegible] of the price f. o. b., Philadelphia is [illegible] 1c per quart.

Farm Products Prices and Prospects

GILBERT GUSLER

New Member of Our Market News Staff

For a month or more Pennsylvania Farmer has been making a special feature of this department. It is intended to give the farmer sidelights on the market situation in the whole country as a supplement to the regular market reports.

Gilbert Gusler, formerly a member of the Department of Animal Husbandry, at the University of Illinois, has been added to our list of market reporters to supply us with this material.

Prof. Gusler taught animal husbandry for three years in the Ohio State University, from which College of Agriculture he graduated eight years ago. He also holds the degree of Master Science in Animal Husbandry from the University of Illinois. He was born and reared on a farm in Northwestern Ohio.

During his educational career Mr. Gusler devoted special attention to live stock marketing. He spent several summers in the study of methods of doing business in the stock yards. The Bureau of Markets commissioned him to investigate a number of big markets and collect information upon the factors influencing prices of various kinds of live stock, meats, and animal by-products, and the methods of reporting these various markets, and later to investigate the market classes and grades of live stock as a means of devising a uniform classification which it could use in its market reporting work at Chicako, Omaha, Kansas City and East St. Louis. He spent some time at each of these markets and at all the principal centers, studying the special conditions at each one. As a result of his findings the hog classification which the Bureau now uses, was put into effect and modifications were made of the cattle and sheep classifications.

A BRUTAL LAW

The colored gentleman who defined a court as "a place where they dispense with justice" furnished a proper description of the present operation of the famous law of supply and demand. We have it upon the authority of none other than Herbert Hoover, whose friendship for farmers was occasionally open to question, that farmers were the only class of society which maintained and increased production during the war. **Behold his reward! Several of the farmers' chief products have been reduced in price from 40 to 50 per cent or more from tha price levels they reached during the war, while many other important commodities still remain on the price summit and the business world is startled by declines of 15 to 25 per cent in some manufactured articles.**

For a year the cry from all quarters has been that greater production was the chief need of the world in getting back to normal. The farmer, with the aid of nature, has turned the trick in his sphere and immediately he is punished. His products grown and cared for with high cost labor, machinery, fertilizers and other materials are now priced far below cost of production. It is the law of supply and demand. The same thing would occur to any other group of producers of a staple commodity which should increase its output at a time when producers along other lines were curtailing. The goods which were scarce would remain high priced while the goods which were plentiful would be cheap.

What is the remedy? Were that question easy it would have been answered long ago. Were it merely a question of eliminating a few speculators it would not be hard to solve. But it is more than that. It involves making the law of supply and demand, serve instead of crucify. There must be a less brutal way of keeping production within the bounds of the world's needs and ability to conserve. Thus is the task bounded on one side, and and on the other must be recognition of the peculiar obligation of those who live on the land from which must come the sustenance for all. And then Nature's haphazard methods of giving or taking away the increase irrespective of the world's needs must be considered.

A REMARKABLE CORN CROP

A corn crop of 3,216,000,000 bu., the largest on record, was suggested by the Government October 1 crop report, showing 85,000,000 bu. in excess of the September returns and nearly 300,000,000 bu. in excess of last year's harvest. As compared with the 5-year average there is an increase of 456,000,000 bu. Practically all of the leading states have the prospect of a larger crop than a month ago, Illinois gaining 19,000,000 bu. and has 307,000,000 bu. or 6,000,000 bu. more than last year, while Iowa has 427,000,000 bu., the second largest yield on record, and compares with 416,000,000 bu. harvested last year. The seven surplus states have a total of 1,707,000,000 bu. or 64,000,000 bu. in excess of September and compared with 1,464,000,000 bu. harvested last year. In 1912 the total for the country was 3,125,000,000 bu. of which the seven states had 1,833,000,000 bu. so that while the total for the country in 1920 is 91,000,000 bu. more than in 1912 the so-called surplus states have 126,000,000 bu. less than in that year.

The oats crop is estimated at 1,441,000,000 bu. or 2,000,000 bu. more than a month ago, and compares with 1,248,000,000 bu. harvested last year. Of barley the crop is 191,000,000 bu. or 3,000,000 bu. less than a month ago, and compares with 166,000,000 bu. last year. The flax seed crop aggregates 11,700,000 bu. against 8,900,000 bu. last year, and white potatoes 415,000,000 bu. against 358,000,000 bu. last year.

REDUCTION IN WHEAT CROP A SURPRISE

The fact that the corn crop was to be the largest on record was recognized sometime ago, so that the showing of the Government October returns was not surprising. The reduction in wheat, however, was much more than the trade believed, the spring wheat yield being cut 19,000,000 bu. during the month to 219,000,000 bu. or only 10,000,000 bu. more than last year. The aggregate of the spring and winter kinds is 751,000,000 bu. which with a carry-over of 150,000,000 bu. makes a total supply of 901,000,000 bu. available for export and domestic consumption. After allowing for the same consumption, feed, seed, etc., as in 1919 there is about 250,000,000 bu. available for export of which there has been 100,000,000 bu. actually shipped so far, and an equal quantity sold abroad and will be shipped between now and February 1. On the statistical showing there is only around 50,000,000 bu. more than can be spared if we are to carry over a normal amount into the 1921 crop. The statistical situation favors higher prices for wheat later on, and if financial conditions in this country and abroad will permit prices will go higher. Imports of Canadian wheat so far probably aggregate around 1,000,000 bu. and there is close to 1,500,000 more bought to come in. There is no import duty on Canadian wheat and the low rate of exchange has also favored business at relatively lower prices than charged for the domestic. The main factor, however, in causing imports of Canadian grain has been the poor quality of American northwestern yield. While we are importing Canadian wheat it likewise reduces the amount that country has for export to Europe. It is necessary to treat North America as a whole in discussing the wheat situation in consequence. In addition to financial and political events the future course of the market will probably be determined by the outcome of the Argentine and Australian yield. India has received some rain, but needs more. Small exports are noted from that country and Russia. Argentine has received ample moisture and crop reports from that country are much more favorable.

NEW LOW PRICES ON GRAINS

Grain prices have continued on the downgrade, wheat, corn and oats selling at new low figures on the crop the past week, cash wheat getting below $2 and corn below 90c at Chicago, while at Omaha corn dropped under 80c. Not only are all grains selling now below the cost of production but they have declined considerably below the level they should be, based on the lowering of prices of all other commodities. Wheat, corn and oats at the inside figures showed reductions of around 50 per cent as compared with what they were a few months ago, the least decline being in wheat which is sustained to a great extent by a stronger position than exists in the corn and oats.

SEED PRICES LOWEST OF SEASON

Seed prices declined still further the past week, reaching the lowest point of the season. Prices have reached a level at which much light yielding acreage will be abandoned because it will not pay for hulling. Receipts are falling off. Quotations at the close of the week were:

Toledo: per bushel, 1919 prime red clover, $13.75; 1919 prime timothy, $3.05; 1919 prime alsike, $16.75.

Chicago: per 100 lbs., clover, $15@22; timothy, $5@6.50.

FEED PRICES STILL HEADED DOWNWARD

Views of extremely bearish operators who several months ago predicted that bran would go to $30 in milling centers were verified when sales were made last week at $28 at Kansas City and $29 at Minneapolis. The uncertain feeding outlook, the crisis in certain dairy districts, the abundance of feed grains and good fall pastures along with open weather, have cut the demand to unusually small volume. All feeds are lower, middlings declining more rapidly than bran. Mills are becoming more unwilling to sell, but some further decline may take place before winter demand revives.

PRODUCER GETS LITTLE FOR HAY

Prices for hay in central markets have little for the producer when costs of harvesting, baling, hauling to market, freight and handling charges are subtracted. There is no early fall demand, but producers may decide to hold rather than sell for little or nothing, and cold weather is certain to prove a slight stimulus to buying.

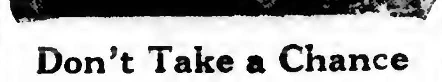
EGG AND POULTRY RECEIPTS BELOW 1919

Receipts of eggs at leading markets fell off during the past week and are running considerably below those of last year. Prices advanced on the best grades at most points. Receipts of dressed poultry at four leading cities since January 1, 1920, are 108,674,712 lbs. compared with 134,016,641 lbs. a year ago. Prices sagged slightly in a number of markets during the past week.

BUTTER MARETS OPEN STRONG; CLOSE WEAK

Butter markets have been badly upset the past week. The advance of last week continued on extra during the early trading. Later a weak tone came over the market and bearish sentiment has grown very strong.

ElectricFlashlight



Don't Take a Chance With Fire

In many places a lantern or lamp is not convenient or safe—then you need a flashlight, absolutely safe—always ready—when going "down cellar" or "up garret"—when harnessing the team in the dark—whenever you need instant portable light, indoors or out, you need the dependable Electric Flashlight.

This Franco Electric Flashlight is 7 in. long, made of metal with Fibrocoid covering—plain, simple, durable. Given as a reward for two yearly subscriptions at 75 cents each or with a single subscription and 75 cents additional.

Pennsylvania Farmer
261 S. Third St. Phila., Pa.

Swine

READY WEEKLY 125 PIGS
75 Chester and Yorkshire Cross, 50 Chester and Berkshire Cross Barrows—sows or boars, 6 to 7 weeks old, $5 each; 8 to 10 weeks old $6 each. Boars $8. These pigs are the result of several years of selective breeding and show the blood value of big type registered boars. They have the bone, back, and barrel of the purebred, feed easy, grow fast, dress high. Shipped on approval. Pay C. O. D. if satisfied. Reference Waltham National Bank
SUBURBAN LIVE STOCK CO., Waltham, Mass.

High Grade Durocs A litter mate to Scissors, Grand Champion at the National Swine Show, sired our herd boar; and Pals Lady, a grand champion sow, is his dam. Write for prices of spring or fall pigs if you want good Durocs.
D. M. STOUDT, HERSHEY, PENNA.

DUROC JERSEYS
Twelve weeks old. High Class. Finest Breeding. Both Sexes. Price Reasonable.
R. D. Harrison, Huntington Mills, Pa.

REGISTERED O. I. C.'S
All ages. Bargains in bred gilts and boars of all ages. We are overstocked and the price is right.
ELM GROVE STOCK FARM, Cortland, N. Y.

EDGEWOOD HAMPSHIRES
Everything sold. Booking orders for gilts bred for fall farrow, and pigs for Pig Club work only.
DEPEW HEAD, MARION, OHIO

FOWLER'S PURE BRED HAMPSHIRES
Will please you. Best and largest herd in East.
THE FOWLER FARMS, MACUNGIE, PA.

VIEWMONT FARM, Mainville, Pa., offers choice O. I. C. 150 to 175 lb. April and May pigs, from sires and dams out of National Grand Champion boars. Reg. free. Shipped C. O. D.

O. I. C.'s 2 registered boars, born May 30, 1920. Register numbers 94686 and 94687.
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Special Sale REGISTERED DUROC SOWS bred for Summer farrow, $65.00 each, registered and express paid.
BELROSE FARMS, RICHFORD, N. Y.

REG. DUROCS Large size, heavy bone, best blood lines, prices reduced for fall. Satisfaction guaranteed.
JOHN W. COX & SON, New Wilmington, Pa.

Big Type Poland China. Sired by Chief Lad, a grandsire of Mountain Giant, the $5,000 hog. Papers fur. Satisfaction guaranteed. J. S. Funston, Amberson, Pa.

CHESTER WHITES For Sale. Service boars and young pigs, all ages.
ALLAN R. MORTON, ASHVILLE, N. Y.

REG. LARGE ENGLISH YORKSHIRES. Short nose, good length, prolific and quick-growing type. Fall pigs for sale. J. Homer Reams, Luthersburg, Pa.

REG. O. I. C. PIGS. Aug. 1st farrow. Quality guaranteed. Two gilts, 7 months old.
L. D. LAUSHEY, SMOKETOWN, PA.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, Center Valley, Pa.

O. I. C. Males 2 to 4 months old. Satisfaction guaranteed.
BRUBAKER BROS., Star R, Cocolamus, Pa.

BERKSHIRES that make satisfied customers. The Barnes Purebred Stock Farm, Grove City, Pa.

Reg. Duroc Boars Col. Crimson Wonder, of Orion breeding.
W. E. ANDREWS, MILLERSTOWN, PA. R. I.

REG. BIG TYPE POLAND CHINA pigs, $15.00 each, first of November delivery.
C. E. SECHLER, MARKLETON, PA.

REG. O. I. C'S, all ages. Open and bred gilts at prices to move them
Black Diamond Minorca Farm, Mt. Bethel, Pa.

HAMPSHIRE SWINE
LOCUST LAWN FARM, Bird-in-Hand, Box 2, Pa.

Big Type Poland Chinas All ages. Write your wants.
KEYSOR & CLELAND, GREENWICH, OHIO

REG. DUROC JERSEY Pigs, prize winning stock Orion Cherry King. ROLAND G. & KENNETH E. LAY, NEWVILLE, PA.

CHESTER WHITE PIGS.—A fine lot now ready to ship, either singly or in pairs.
R. L. MUNCE, Canonsburg, Pa.

MARYLAND NOTES

With apple barrels selling at $1.25 to $1.50 apiece, and many manufacturers refusing to make them at these prices, with a large apple crop soon to be harvested, with low prices prevailing, and few buyers on the spot, fruit growers in the central part of the state face a serious situation. Last year growers had keen competition when it came to selling their apples, and often received as high as $5.50 a barrel. This year the buyers haven't appeared, and with the prospect of having to ship apples in bulk, due to inability to secure barrels, hampers and boxes, rowers do not think prices are likely to be attractive. It is even predicted that unless sufficient barrels can be found many growers will have to dispose of their highest class fruit to canneries.

A largely-attended meeting of the Wicomic Tomato Growers' Association was held in the Court House at Salisbury last Saturday afternoon to discuss the tomato situation in that county. Reports from all sections were to the effect that a very large acreage of tomatoes was grown, and that, at prices offered by the canners, the growers faced heavy losses.

From Westover and Marion comes the report that the tomato canning factories in that section will not be operated this season. It is also reported that several farmers hauled big loads of ripe tomatoes to the factories in that section last week, only to find the places closed. These farmers, it is said, were unable to ship their tomatoes to the cities for sale, because of car shortage, and were forced to haul their loads back home to rot.

Tomato canners, it is said, are unable to procure cans in which to pack the tomatoes, and even tho they were able to procure the cans, they state they would be unable to ship this pack because of the freight car shortage. The tomato acreage in Wicomico, Somerset and Worcester Counties of this State and in Sussex County of Delaware, is said to be the biggest for many years. Hundreds of thousands of dollars will be lost to the farmers of these four counties unless some way is found for them to dispose of tehir crops.—K. P. T.

DELAWARE NOTES

The meeting of the Seaford Produce Growers' Association last Friday evening was one of unusual interest. The President,, Brooks L. Ross, had just returned from Columbus, Ohio, where, as a representative of the Peninsula Tomato Growers' Association, he had attended the meeting of a committee called to consider the orgonization of an Inter-State Canning Crops Association.

Among other things, Mr. Ross reported that he had learned that in Ohio and Indiana the average crop of for which the farmers receive from $22.50 to $25.00 a ton, and baskets furnished by the canners. This means an average production of over 500 baskets per acre, and an everage price of nearly 40 cents a basket, or about $200 an acre and the baskets furnished. It will at once be seen that tomato growing is much more profitable there than here. At 50 cents a basket, the price asked this year, the tomato crop would have netted far less than there at the price named. Yet the farmers would hardly have gotten cost of production out of the crop had they realized 50 cents a basket and furnished baskets themselves.

It is very unfortunate that in this section there seems to have developed a feeling of hostility on the part of the canners toward the farmers. The farmers, in naming 50 cents a basket as the price for the tomatoes this year named a price fully as low as tomatoes can be grown for, as the cost of production now stands. As evidence of this hostile feeling one canner who has a canning factory within twenty miles of Seaford, is reported on good authority to have said the canner could have paid 50 cents a basket this year, but they were going to break up the associations in Maryland and Delaware.—Karl P. Thompson.

CONDITIONS IN SOUTHERN WEST VIRGINIA

The season has been remarkable for its lateness and for weather unfavorable for getting farm work done on time.

The spring was backward and most corn was planted late, but what corn was platned early has not developed and matured on time. Usually a large part of the corn crop was cut by the middle of September.

But on this date (September 16th), the earliest corn is green and showing only an occasional white husk.

Sorghum cane planted latter part of May, is just heading out. Under favorable conditions, it should have been ripe.

The usual wheat harvest time for this section is about June 20th, but it went considerably into July this year.

The livestock market seems to be dead. Only a few lambs have been sold, and these went at 8½ cents per pound.

I have not heard of any cattle at all selling, except a few for the local beef market.

The apple crop is very light in this section, and there were only a few peaches, and they were of rather poor quality.—A. J. Legg, Nicholas Co., W. Va.

A DECIDED SUCCESS

With three days of ideal weather, the Morris County, N. J., fair was attended by thousands, and attracted visitors from all over Northern New Jersey.

The people seemed most enthusiastic about the fair this year, and have nothing but praise for the management. There is no doubt that through the untiring efforts of the officials, it was altogether the biggest and best fair ever held in Morris County.

Owing to the way the public showed its appreciation, the Fair Association should be encouraged to start at once for the 1921 fair, with the purpose of making it the best exhibit in the state.—W. H. A.

COUNTY NOTES.

Cumberland County, N. J.—A good rain September 30th. Corn being cut. A great crop this year. Lima beans scarce and high. Great quantities of tomatoes wasting in the field, as the price is too low to pay the grower to pick them. Apples plentiful. Silos are being filled. Late potatoes are in bloom and look nice. There has been frost to affect the cranberries.—C. J. S.

Time to buy a thermometer if you haven't one, and resolve to keep the house not over 70 degrees this winter.

Patent Tension SHEARS

Self-Sharpening, Made of good quality cutlery steel, 8 inches long with patent adjustable spring tension bolt, preventing the blades from spreading and giving a clean cut the full length. Nickle silver finish, highly polished.

Sent prepaid for two subscriptions for the balance of this year and all of next, or to Jan. 1, 1922, at 75 cents each. Given with a single subscription and 35 cents additional.

Pennsylvania Farmer
261 S. Third Street, Phila, Pa. 8 Inches Long

Swine

O.I.C. Swine We have some bargains at present in young pigs and service boars. Will close them out very cheaply before going into winter quarters.
ELM GROVE STOCK FARM, Cortland, N. Y.

Arcadia Farm Chester Whites
A choice lot of young boars and gilts on hand. Also some small pigs. Bloodlines of Petroleum Giant, Combination Defender, Schoolmaster, Weddle, etc. Exceptional quality. Reasonable prices. ARCADIA FARM, Box D, Bally, Pa.

Fashion Herd of Poland Chinas
Fashion Giant and Ohio King, our 1,000 lb. boars of advanced breeding. Sows, bred pigs in pairs, skin, out of 700 and 800 lb. sows. Address
C. S. EPPLEY, ZANESVILLE, OHIO

REGISTERED DUROC-JERSEY PIGS
$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs.
C. W. Ellis, Jr., Maple Lawn Farm, Cortland, N. Y.

CRYSTAL SPRING STOCK FARM, Seelyville, Pa.
Offer 20 registered Berkshire gilts of April farrow weighing 185 to 200 pounds, by Symboleer's Master piece, the wonder boar and son of our American Champion, Symboleer's Junior. 2 boars suitable to head the best herds anywhere.

REG. DUROCS. Several Sows and service boars for sale. Also good spring boars. Good type and breeding. Northumberland Co. Duroc-Jersey Breeders' Assn., J. M. Fry, Corresponding Secy., Sunbury, Pa.

Large Type Reg. Berkshires of all ages for sale. Select a breeder from a large litter. Pay when you see stock. No cash in advance.
DAVID WIANT, HUNTINGTON MILLS, PA.

SELECTED O. I. C. and BERKSHIRE PIGS, 8 weeks old, $4.00 each. Ten registered O. I. C. boars 12 weeks old. Quality guaranteed.
THE OAKS DAIRY FARM, Wyalusing, Pa.

HEAD YOUR BERKSHIRE HERD with a son of Highwood Majestic 19th. Pigs from spring and fall farrow. Write for prices and pedigrees.
MARVIN BEACH, FRANKLIN, N. Y.

Reg. Berskshires with size and quality; long bodies, good in back and legs. Spring pigs and bred sows.
NEARBY STOCK FARM, POTTSGROVE, PA.

REG. CHESTER WHITE PIGS, either sex, August farrow. Ready to ship.
A. F. REIMENSNYDER, MILTON, PA. R. 2

Reg. O. I. C.'s Booking orders for early pigs. Prices reasonable.
BENJ. H. RUTLEDGE, Honesdale, Pa., R.

NELSON'S BERKSHIRES, 5 spring boars with size and quality. Also gilts. Satisfaction guaranteed.
W. D. NELSON, Jr., MARSHALLTON, DEL.

Miscellaneons

Percheron Stallions
Son and grandson of famous stallion "DRAGON." Proved very reasonable.
CRESTMONT FARM, SUNBURY, PA.

CASH PAID
for well trained rabbit, coon and bird dogs; must not be man, gun nor auto shy; and be good all day hunters. Reference, First National Bank, New Kensington, Pa.
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Fox, Coon, Skunk, and Rabbit Hounds; also puppies and started dogs. Buy now and know your dog when the season opens. Stamp for reply.
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TIFFANY'S SUPERIOR DUCKS
Mammoth Pekin, Giant Rouen, and Indian Runner Ducks and Drakes, $2.50 each and up.
Aldham Poultry Farm, R 37, Phoenixville, Pa.

Broken Hounds for Sale. Highly trained dogs of all kinds. Coon, Skunk, Rabbit, Airdales, Pointers and Setters. Also Puppies of all kinds.
GLEN ROCK KENNELS, GLEN ROCK, PA.

Ship Us cultivated and wild chestnuts, butternuts, black walnuts, fancy eggs, calves, poultry
Wm. H. Cohen & Co., 232 Washington St., N. Y. C.

Chester Whites and HAMPSHIRE SHEEP. Write your wants. We can TWIN BROOK FARM Newville, Pa.

REG. HAMPSHIRE DOWN SHEEP. Ewe and ram lambs, best of blood. Priced right.
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To the general public, milk is milk. It does not appreciate the fact that no other organic foodstuff, except meat, shows such marked variation in food value. It is not the fat in milk, but the proteins, which build bone and muscle and impart vitality. Purebred Holstein cows' milk is low in fat percentage, but rich in those desired proteins. Scientists have established the fact that the big, healthy, vigorous Holstein cow possesses more vitality than other breeds, and is able to transmit that vitality thru her milk to the consumer. It is vastly superior to ordinary cows' milk for infants, invalids and convalescents, or for regular family use. It is more easily digested, owing to its small fat globules.

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Ten years ago an Ohio boy bought a Guernsey heifer for $87. Today the boy is a prosperous Guernsey breeder. Let us tell you how you can become a Guernsey breeder.

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QUALITY ECONOMY QUANTITY

FOR SALE KING OF THE MAY
Golden Secret Bull Calf. Price $200. Sired by Brookmeads Royal Master of Riverview who is brother to the great bull, Langwater Stars and Stripes 2nd and grandson of the famous Imp. King of the May, who now has thirty A. R. daughters who exceed 622 lbs. butterfat and is also sire of Dolly Dimples May King of Langwater. Calf beautifully marked, out of a cow who is really a show cow. First check takes him. Satisfaction guaranteed or money returned.
RIVERVIEW FARMS
SWARTHMORE, (Delaware Co.) PA.
12 Miles from Phila.

STEVENS HOLSTEIN FARM
of Cortland, N. Y., offers pure bred cows and calves, all ages; also extra high grade Holstein heifer calves $20 each, express paid in lots of 5; 2 heifer calves with purebred bull calf $75. Grade Holstein cows in car load lots. Wire me to meet you.
PAUL H. STEVENS, Prop.

Poultry

NONESUCH FERRIS WHITE LEGHORN PULLETS
300-egg strain, from trapnested hens, bred for 18 years to lay more eggs in fall and winter. Sired by sons of Prince Eglatine. April hatched. $5.50 each. Impossible to breed them better. H. M. SPAHR BREEDING ESTATE, Woodsboro, Md.

LOOK! Baby Chicks $15 a 100 Up.
Postage paid. Leghorns, Rocks, Reds, Wyandottes, Orpingtons, Minorcas, Anconas, odds and ends. A hatch every week in October and November. Catalog free. Stamps appreciated. Nabob Hatcheries, Gambier, Ohio.

Sicilian Buttercups
Farm range, prize winning Buttercups. Investigate this wonderful variety. Write for circular.
MAPLE LAWN FARMS, CORTLAND, N. Y.

LIVE POULTRY
Hay and all farm products wanted. Daily demand at good prices. GIBBS & BRO., 325 North Front St., Philadelphia, Pa. Estd. in 1844.

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
SELBY PRODUCE CO., PHILADELPHIA

Pullet Sale 300 fine large S. C. White Leghorns, 5 months old, ready to lay, $3 each. Range raised. Good laying strain. Prompt shipment. R. D. 1. Satisfaction guaranteed.
CHAS. DOCK, MIDDLEBURG, PA.

LEGHORN COCKERELS From Barron 300 egg strain. Pure-bred S. C. White Leghorn cockerels. Hatched March 3. Prompt delivery. Satisfaction guaranteed. Price L. C. BEAM, E. Mauch Chunk, Pa.

25 RHODE ISLAND RED PULLETS. May hatched, range raised from heavy laying strain. Also Black Muscovy Ducks, $10 pair, $15 trio.
R. M. AITKEN, NORTH PITCHER, N. Y.

Barred Rocks (pullet mating). Excellent layers. Buttercup, Ancona cockerels and pullets. Range raised. Prices right. J. K. Cadwallader, Wellsville, Pa.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Eczema.—One of our work horses has skin trouble. It does not seem to affect his general health, as he has good appetite and does his work as well as mate. O. J. K., Burton, O. —Wash him with soap and water twice a week; apply one part coaltar disinfectant and 40 parts water twice daily.

Barren Holstein Cow.—Have Holstein cow 11 years old, last fresh July, 1919. She has been served by three different bulls, but fails to get with calf. Her womb has been scraped by veterinarian, without good results. S. W., Elmira, N. Y.—Dissolve ¼ lb. of bicarbonate of soda in half a gallon of clean tepid water, flush vagina 3 hours before she is served. Use a fountain syringe. Remember, she is eleven years old, some cows fail to breed after they are her age.

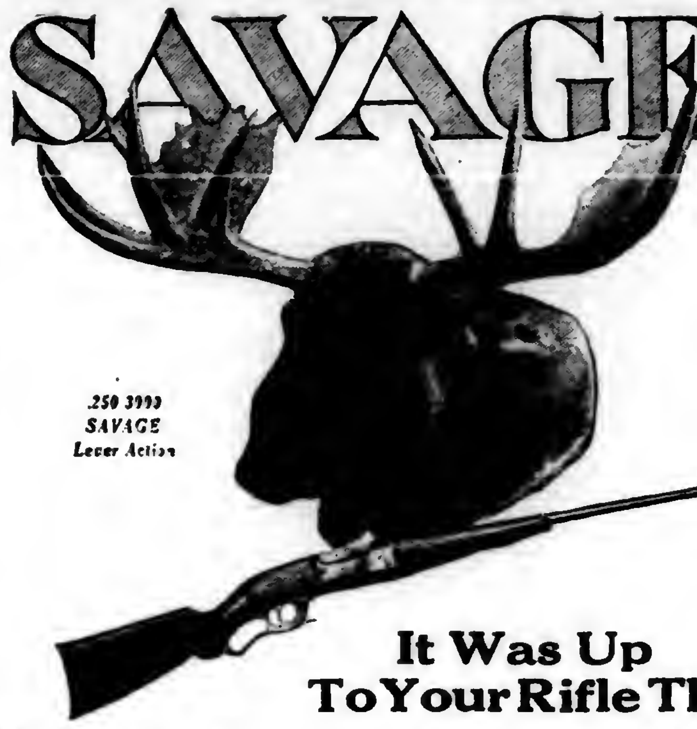
Apopleticform Septicemia in Chickens.—I am anxious to know what is causing the death of so many of my chickens. My hens are dying at the rate of 6 or 8 a day. No treatment that I have given has done any good. They hang their head, feathers loosen on their back, and within 24 hours die. Hen house cleaned every ten days or two weeks. No lice or mites of any account. I am told they die of limberneck. Have been one of your readers for several years. W. H. S., Lewisburg, Pa. This disease is due to the Streptococcus Gallinarum, which grows in long or short chains. Experimental inoculations with this organism kills chickens, mice, rabbits and swine. It does not kill guinea pigs or dogs. The germ multiplies in the blood and the disease is rapid in its progress. Often birds die in from 12 to 24 hours after the first symptoms appear. If you will open a dead bird, you will find the spleen soft and enlarged, kidneys diseased, so is the liver. Now regarding treatment, first observe the rules of sanitation, clean and disinfect coop, separate sick and well. Vaccination with a vaccine made from the Streptococcus Gallinarium gives good results. Ptomaine poisoning is what is commonly termed limberneck, often due to eating decomposed meat or fish.

Sore Throat.—Chronic Cough. —Have calf five months old troubled with cough, which was preceeded by sore throat (Quinzy) and too much bowel action. She seems to be all right, except her cough, but fails to lay on flesh. M. C., Rainsburg, Pa.—Apply camphorated oil to throat once a day, give thirty drops of Fowler's Solution at dose in feed 3 times a day.

Indigestion.—Have cow that calved two months too early, she gave six quarts of milk, but she coughs. When she calved, our veterinary took care of her. She is free from tuberculosis, but her breath has bad odor and she refuses to eat grain. W. B., Waterville, N. Y.—Mix equal parts powdered gentian, powdered red cinchona, ginger and bicarbonate of soda together and give her a tablespoonful at dose 3 times a day. Change her feed and don't forget to examine her teeth.

SAVAGE QUALITY

SAVAGE



It Was Up To Your Rifle Then

WHEN it's all over and you're back for another long stretch of work, what have you to look back on? Did your trip come up to your expectations?

Do you look back on that one big chance—the only one your whole time out, when, after fighting through rocky gullies and scraggly bush, you sighted him—a big, black Bull Moose, monarch of the forest and lakes—AND HE SIGHTED YOU!

It was up to your rifle then—one shot to do it—and you got him!

R. F. McClellan got his Moose with a .250-3000 Savage Rifle. Killed him with one shot at 1,100 steps—something over 1,000 yards, while the big bull was ramming through the underbrush to safety. The vicious little 87-grain bullet struck just in front of the hip joint on the left side—ripped through the whole length of the great body and was later found just back of the right shoulder between the hide and the flesh.

That's Mr. McClellan's testimony of Savage reliability. And mountain sheep, goats and Alaska bear have fallen before his deadly accurate Savage Rifle.

The .250-3000 Savage Rifle is made in both lever action and bolt action models. See them at your dealer's or write us for complete descriptive catalogue.

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Dairy

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High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.
C. W. Ellis, Jr., Maple Lawn Farms, Cortland, N. Y.

BULL CALVES at BARGAIN PRICES
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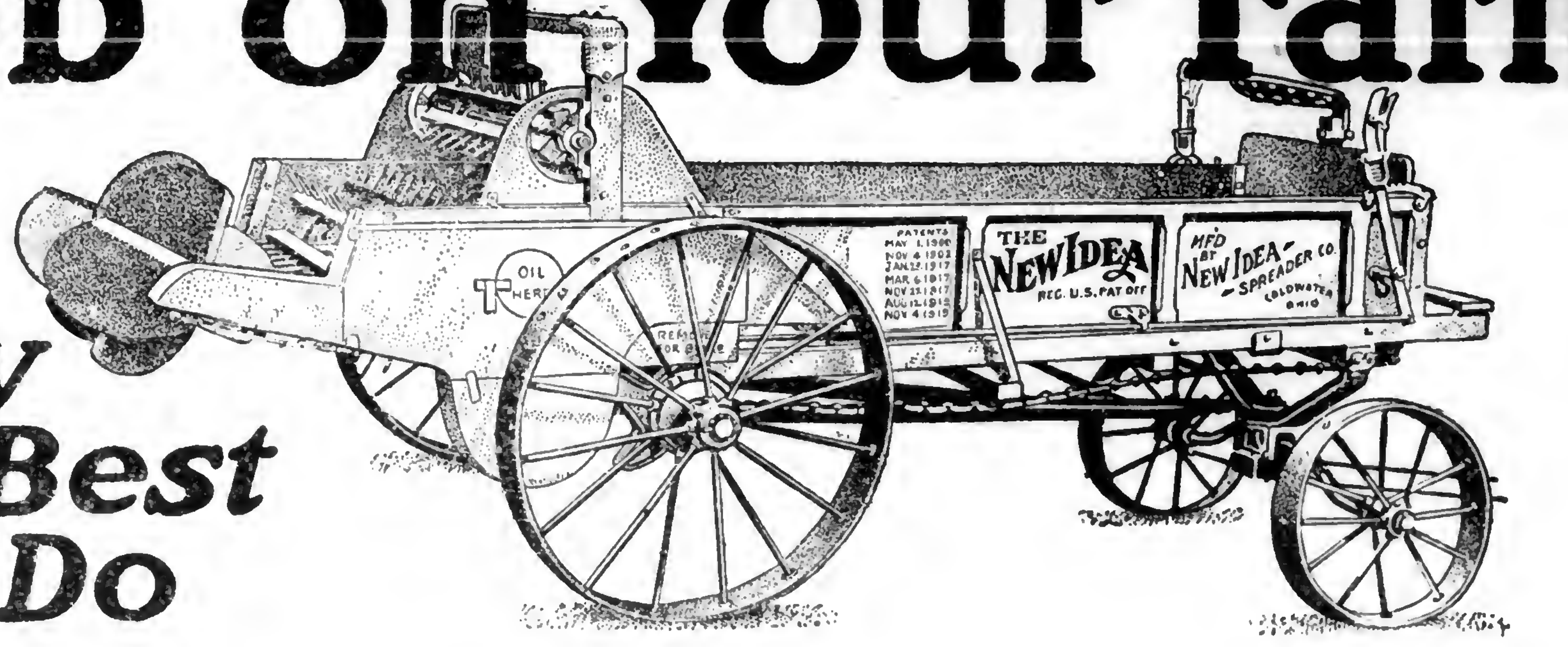
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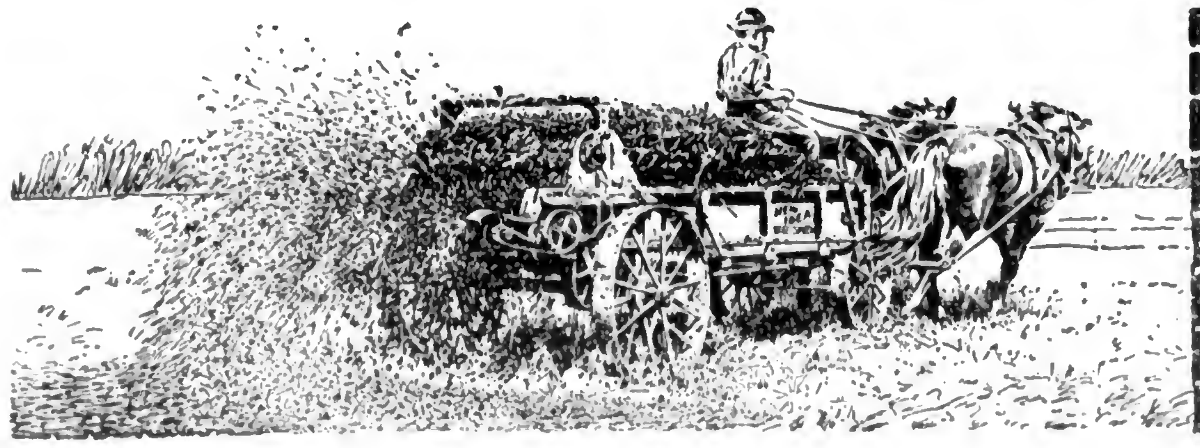

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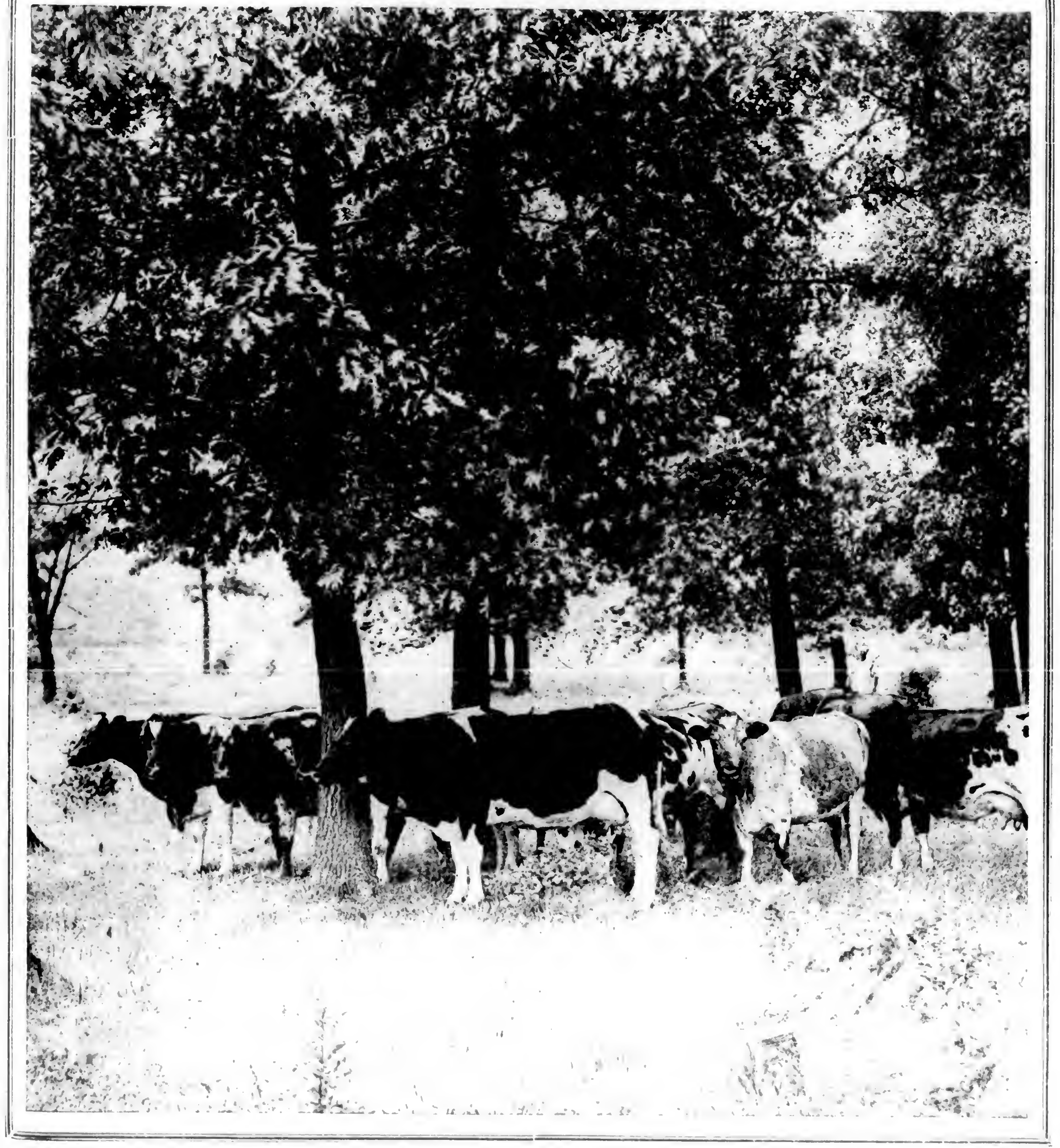
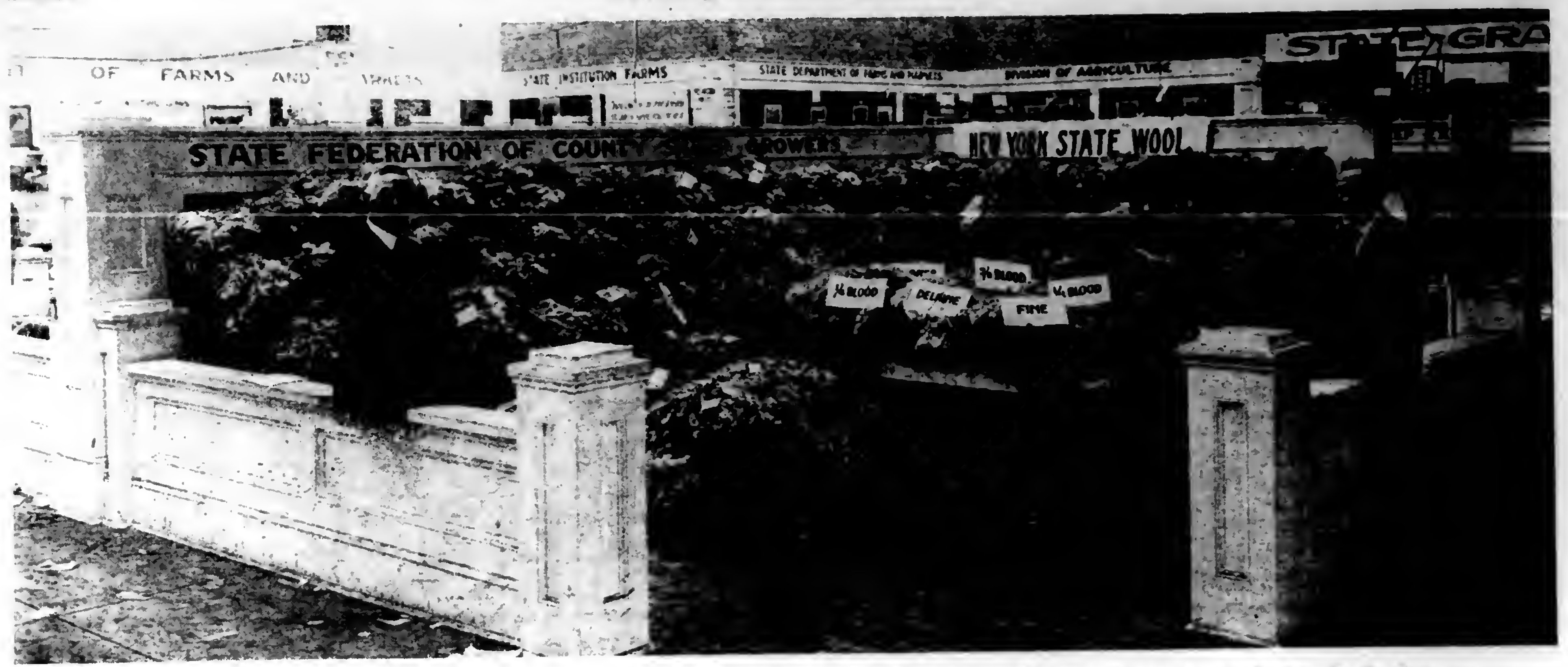




First New York State Wool Exhibit, at Fair, 1920. At Left, E. S. Hill, Sec'y Federation of Sheep Growers; at Right, F. E. Robertson.

Shepherds are Banding Together

The Importance of Sheep Growers' Organizations---By F. E. Robertson, New York

What of the future of the wool growing industry in the United States? Guarantee to the growers seventy-five cents to $1.00 per pound for their wools and the future will take care of itself. Give them assurance of a fair price for their clips and it will be but a few years before our rough hill farms, both in the east and in the west, will again be populated with sheep and you and everyone else will be assured of a sufficient supply of new "virgin" wool so that all may wear warm clothing during the winter months. Nothing else but a fair price for raw wool will ever bring back or stabilize the sheep growing industry. Nothing else will assure the people of this country that they can depend upon an ample supply of warm woolen clothing. Surely it is not the first cost of the wool that determines the selling price of a suit of woolen clothes. Time and again it has been reiterated, in the press and elsewhere, that six or seven pounds of wool as it shorn from the sheep is sufficient to make enough yarn for a suit of clothes that retails for $60 to $70. The market value of seven pounds of wool today, if there is a market at all, would be around fifty cents per pound or, $3.50. Doubling the price paid the grower for the raw wool will slightly increase the cost of a suit of clothes but, what is of greater economic importance to the country at large is, it would tend to stabilize the industry by encouraging the growers.

This industry must be protected or it will, because of its unprofitableness, decline and become history of the past—an industry that was not fully appreciated. Our wool growers have been jockeyed by tariff legislation; their flocks have been ravaged by dogs beyond the control of cumbersome dog laws; and they have been brow-beaten by a trade system that has had almost undisputed control of the wool marts of the world trade system that stands between the producers of "virgin wool" and the man who wears woolen garments, exacting tribute in the name of legitimate profits. So today the wool growers are facing a situation that is both difficult of explanation and discouraging in the extreme. But there are among these men, those who in their moods of optimism and determination not to be beaten, are standing for their rights and for the recognition that the sheep growing industry merits.

To become sullen and despondent is a characteristic of masses of men in periods of adversity, and it always remains for those who are to become leaders to correctly analyze the situation and direct the action to be taken. This is being exemplified today among the sheep growers in the United States in the almost national movement to oranize themselves in to county sheep growers' associations for mutual interests and protection. The great majority of the sheep growers are banding together into these county units, which in turn are being united into statewide federations of county associations. Up to the present year the object of these county organizations has been educational, but more recently their activities are being stressed along the lines of pooling and marketing the wool clips and the crops of fat lambs. The permanency of these associations is not questioned, but their greatest service to the individual wool growers will be measured by their ability to work out more satisfactory marketing facilities. In this work they are making real history.

The marketing conditions are most propitious for the rapid crystalization of sentiment among the growers to pool and hold their clips until a more stable market prevails. In periods of adversity men work together, under leader, for a common purpose. This seems to be particularly true among the farmers. It is certainly true among the sheep growers of today. The order of the day is, therefore, to gather the wools into large warehouses where they may be stored and sorted into their respective established grades by men who are qualified and who at the same time are in the employ of the associations. These wools are going to be marketed direct to the manufacturers. It is not a prophecy to say that the old established order of local wool buyers and jobbers is passing; it is a statement of fact concerning which the disciples of the principle of direct marketing should look with enthusiasm. It is, furthermore, good business economy in these days for the producers of raw materials to work out comprehensive systems of direct marketing.

The mysteries of wool grading and salesmanship are not so profound that a few men closely associated with the old established order are alone qualified to perform the tasks. Practice in grading is of course desirable before one can really become adept, but any intelligent grower can acquire the knack. So it is in selling the product to the manufacturers. The wool growers, thru their marketing organizations, will need to become acquainted with the various grades of wools that the manufacturers require. If they have quantities of these grades in their warehouses it should not require any subtle psychology of salesmanship to consumate a deal.

Wool is no longer just "wool" to the members of these wool growers' associations. They are rapidly becoming acquainted with the established grades and are able to discuss intelligently the relative merits and characteristics of "quarter-blood," "half-blood," "three-eights," "clothing," and "combing" grades. Improvement in the quality of the wools and the care of the fleeces is already noticeable among the members. The percentage of "reject wools" in those clips that have been marketed this year are noticeably less than in those marketed during 1919. The county wool growers' associations and their state organizations still have much to do in the way of extending this knowledge in the care of wool clips. Progress is being made in this chiefly through the agency of winter meetings, summer field meetings and educational exhibits at the county and state fairs. Eventually, state wool growers' associations will see it to their advantage to employ capable men to act as state secretaries. These men will devote their entire time to managing the wool pools, developing better markets for lambs, conduct educational work in the care and handling of the wool crop and actively foster the sheep growing industry thruout the state.

The growers of wool, as well as the consumers of woolen clothing, eventually must insist on suitable regulations that will protect the consumers in the matter of being able to know when they purchase a suit of clothes of what materials the cloth has been made. Producers and consumers are denied that privilege now, but the sentiment is growing rapidly for such regulatory laws as will require the manufacturers to so mark their products that the buyers may know whether it is made from "virgin wool" (wools never previously woven into cloth) or "re-worked" wool or part cotton, and the percentage of each. The wool growers must act in this to protect the fair name of their product; the consumers should insist on it because it is within their rights to know the truth.

It is a debatable question as to whether or not the growers of wool in the United States require the tariff to protect their industry from foreign competition. With a higher tariff, probably a more stable market would prevail and anything that will tend to make wool growing less of a gamble will in the long run benefit the industry. The world consumption of wools is advancing at a greater speed than production. If this is not true today, it will be tomorrow. The important thing now is to make conditions favorable to the production of wool so that the grower may receive for it enough to justify the continuation of the industry. If a tariff is needed to accomplish this, then a tariff should be placed on wool imports.

The lethargic condition of the present wool market is not without its advantages. It is responsible for the awakening of the sheep growers to an appreciation of the situation and a realization that they must fight their own battles, and they must fight them as an organization and not as individuals. A spirit of optimism prevails in the main for most surely the shepherds will live to see the day, not far distant, when they will be banded together and come into their own rejoicing, as did the shepherds of old, in the birth of an inward consciousness of their ability to do the things that need doing to make sheep and wool growing as profitable as any other agricultural enterprise.

The New York state sheep growers through their State Federation of County Sheep Growers Associations have just organized their first wool pool at Syracuse and have hired an experienced grader and salesman to build up a reputation for New York state wools. During the recent state fair at Syracuse a wool exhibit was set up that attracted a great deal of attention. Next year they plan to put on an exhibit twice as good and twice as large. There is great satisfaction in following the activities of sheep growers' organizations thruout the United States. It speaks for a better day for the sheep men—this banding together of the shepherds.

TO DIG A TAX DITCH

At Whaleyville, Md., a Tax Ditch Association has been organized. Its object is to drain about a thousand acres of land. It is estimated that three miles of ditches will be required to do it.

Getting ditches dug nowadays is a serious problem. Many a drainage project is at a standstill because labor cannot be secured to dig ditches. Can a laborer be blamed for not wanting to do heavy work like that when he can earn $5.00 or $6.00 a day on an easier job?

In an effort to help the Whaleyville people out of their difficulty County Agent E. I. Oswald induced a practical blaster to show them how to blast their ditches with dynamite; also to let them see for themselves what ditching costs by that method.

As a test the blaster shot 300 feet of ditch. He first staked out his center line. Along this line bore holes three feet deep and two feet apart were put down with a pointd bar. A pound of 50 per cent straight N. G. dynamite was loaded in each hole. The middle hole of the row contained a primer—cap and fuse. The concussion from this middle charge set off all the other charges down the line on both sides of it. It was possible by this method because the soil was wet.

This made a ditch ten feet wide at the top and five feet deep. The cost for explosives was a little less than fourteen cents per running foot.

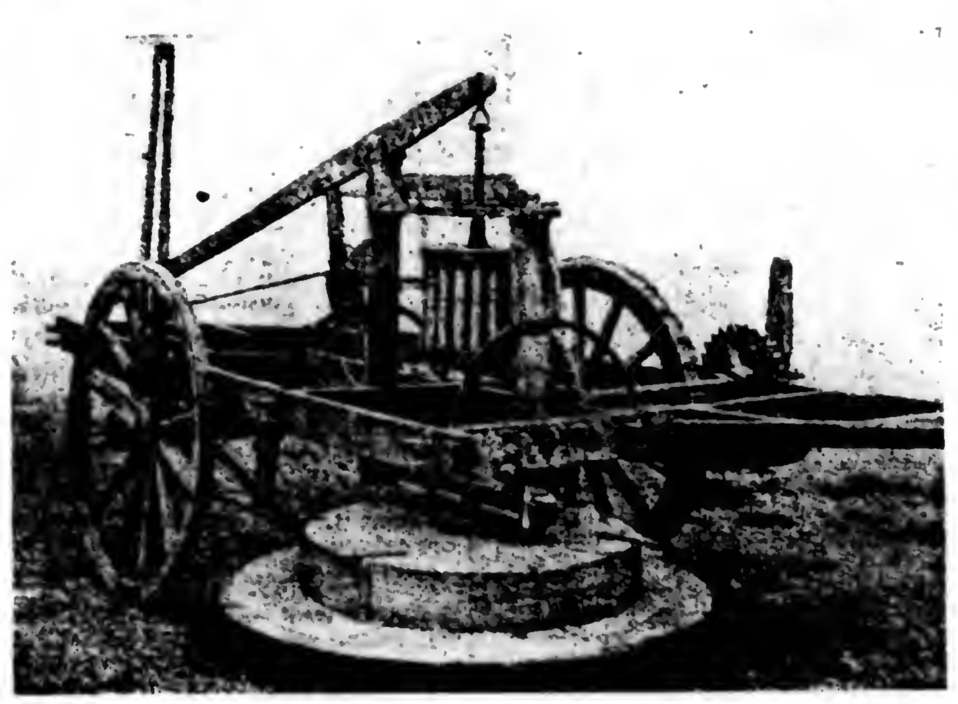
First Mowing Machine

Sixty years ago mowing and reaping machines were not in general use and groups of stooping, slowly moving men laying the grass and grain low in their season of ripeness could be seen annually. No eight-hour working days were those—turning grindstone and baring on the ringing scythe from dawn till breakfast, mowing till 10 o'clock, shaking up hay and raking windrows till noon, hauling in till supper time and then mowing until sunset—this was the order of working in harvest time. There is a sentiment clinging around those days of harvest which the clatter of the mower and reaper has driven away, and when I think of those old time scenes and sounds, the early start in the dewy grass, the falling into swathes of the clover and timothy over the swish of the curved blades, the "whetting of the anter," the luckless plight of the wight who was "mowed around," the luncheon brought out at ten o'clock—a meal of pie, Dutch cheese and ginger cake and washed down with a nectar composed of water, molasses, vinegar and nutmeg—the group of tired, sweat-stained men around the dinner and supper tables, pleasant reminiscences come with the thoughts.

But modern invention has changed all this. The efficient mowing machines and reapers of today are the result of years of inventive study and experimentation. The original creations would hardly be recognized even as the beginning of the developments in this line of machinery.

The first mowing machine made in this country, so far as is known, is illustrated and described herewith. The machine was first tried out in 1825, in a field in Bucks County, Pennsylvania, where the George School is located. The following description was written by Gilbert Cope who lived at West Chester, Pa.:

"A rectangular frame five feet five inches by nine feet ten inches, of white oak stuff, two and one-fourth by six inches, well joined at the corners, divided lengthwise near the middle by another piece of the same stuff, and is supported by two stout wagon wheels about four feet in diameter. The wheel on the off side revolves on an ordinary wooden axle, and stands outside the frame. The other, or driving wheel, is inside the frame on another shaft, which revolves in bearings at each end, about thirteen inches further forward than the off wheel. This has spuds projecting from the tire to prevent slipping, and on the outside of its heavy rim is bolted a cog wheel, three inches in diameter less than the wheel. Its cogs gear into another wheel eighteen inches in diameter on a horizontal shaft four feet long, on the other end of which is a crown wheel about two feet in diameter gearing into a wooden trundle or wallower 15 inches in length and the same in diameter, with iron bands at the ends, and keyed to an upright shaft, at the foot of which is the cutting wheel. This may be likened to a low crowned, broad-brimmed hat, the crown three feet and a half in diameter and five inches high, the brim of inch boards, faced with sheet iron, about five inches wide, exclusive of the knives, which increases the whole diameter to five feet and a half. These knives are segments of a circle, not separate ones, fastened to the edge of the brim, with screws, so as to be removed for sharpening. When in operation the foot of the upright shaft sustaining the cutting wheel rests on a shoe to keep it the proper distance from the ground, and which, extending outward, is bolted to a wooden brace extending from the rear of the frame. To operate the wheel when not in use, a long wooden lever is attached by a twisted iron socket to the top of the shaft, extending back to a slotted post on the rear of the frame. The horizontal shaft passes through a post fastened to the side of the frame in front of the driving wheel, and by the use of a shifter, at each end of this shaft, it is moved back and forth so it will throw the cog wheels out of gear, and the machine can be moved without the cutter running. When running the horses walk close to the standing grass, and the off wheel follows a little inside the track covered by the cutting wheel."



A Primitive Mowing Machine Known as the "Bally," Used 100 Years Ago

"The 'crown wheel' or counter wheel is of cast iron, the cogs far enough apart to stride the wooden cogs of the wallower, and on the face of the wheel so it will be in touch while the cutter is raised and lowered when in trouble from stones or furrows. The diameter of the cutter was afterwards extended to seven feet."

A crowd was there to see the "new fangled thing" work. The team was two horses driven tandem, and the main trouble was from choking down when the "shoe" got into depressions. No machines were sold, it seems, in the vicinity where it was tried. Not only is the illustration and the description of the machine interesting at this day, but the style of advertising done, as shown by the published advertisement of the Bally Mowing Machine which appeared in the American Farmer of 1825, is quite as different from advertising of today as are the mowing machines different from that time.

But there were older machines in the world than the Bally. Pliny saw one A. D. 60. It was a low cart, pushed by an ox, in front of which was a coarse comb which raked off the heads of grain and dropped them into a box. In 1786 a man named Pitt improved this by arranging a revolving toothed cylinder in place of the comb. After this one comes the American invention by Bally, described herewith.

The compiler of this article invented a circular mowing machine consisting of twelve toothed disks, geared with bevel wheels, but it never got beyond the drawings.—Thaddeus Kenderdine.

Soils and Fertilizers

Conducted by Dr. J. G. Lipman

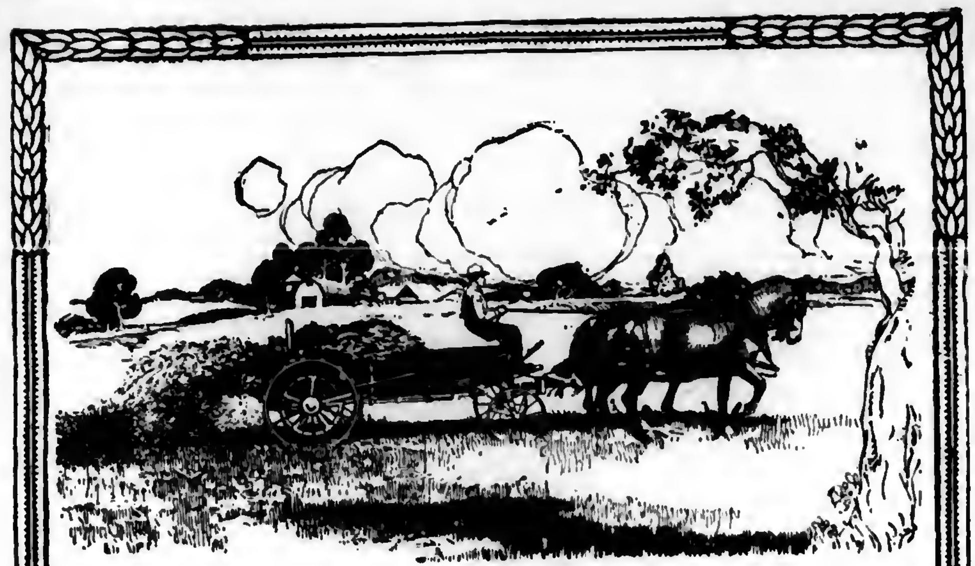
Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

THE OUTLOOK FOR POTASH IN 1921

It is stated on the authority of the National Foreign Trade Council of Germany that the high-water mark in the exportation of potash to the United States an equivalent of 280,211 tons of pure potash, valued at nearly $10,000,000. This country was then the best of Germany's foreign customers for potash. It was estimated that of the total potash production in Germany the domestic consumption was equal to about 50 per cent and exports to the United States amounted to about 25 per cent., while the rest was sent to other European countries. The number of potash mines in Germany was steadily increasing up to the outbreak of the war. In 1913, 46 new mines were opened, whereas in 1916 only 6 new mines were added. In 1918 and 1919, each, only one mine was opened. It is estimated that Germany now has 206 potash mines and that it has ceded 13 Alsatian mines to France.

Since 1914 the users of potash in the United States have been compelled to do with less potash. Up to that time the popular brands used in the potato and tobacco sections contained 10 per cent of potash. This percentage was gradually lowered and the American farmers were given an opportunity to discover whether as much as 10 per cent of potash was needed for the maximum yields of potatoes and of tobacco, as well as of other crops. The record of the past 6 years shows that fertilizers containing 3 to 5 per cent of water-soluble potash are fully as effective as the mixtures containing higher proportions, if not more so. It may be said, therefore, that the war has taught us certain economies in the use of potash and that the mixtures containing 10 per cent of potash will not be in as great demand as they were prior to 1914. At the same time, it has been demonstrated to the satisfaction of potato, tobacco, cotton and other growers that the use of 3 to 5 per cent of potash in their mixtures is not only profitable, but necessary for best returns. Potato growers in New Jersey and the New England States have been shown that an application of about 50 pounds of water-soluble potash per acre is good, under average conditions, for an increase of about 50 bushels of potatoes per acre. In other words, it is safe to assume that, within the limits just indicated, a pound of potash will be good for an increase of one bushel of potatoes. Under favorable conditions, potash will go much farther in increasing production per pound of material used. Something may also be said about the apparent effect of an adequate supply of potash in increasing the resistance of the potato crop, and probably other crops, to attacks by fungi.

In response to the urgent demand for potash during the period 1914-19, this country witnessed the development of the domestic manufacture of potash. In 1915 the production of domestic potash was equivalent to about 1,000 tons; in the following year the production had increased to nearly 10,000 tons. In 1917 it was about 32,000 tons and in 1918 nearly 55,000 tons, equivalent to pure potash. In other words, under the stimulus of high prices, there was produced in this country nearly 20 per cent of the pre-war consumption of potash. The chief source of the domestic production was Nebraska. The brines of the Searles Lake District of California and the sea-weeds along the Pacific Coast, known as kelp, were the next important source of supply. There was also considerable development of potash manufactured as a by-product from ce-



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The wide range of quantity distribution is made possible by the six feed speeds which regulate the spreading density to suit your fertilizing requirements. And with the International, because of the fast-working steel beaters and wide-spread spiral, you drive only half as far to unload as you do with a spreader that does not have these features. Some spreaders merely unload; the International **spreads.**

Isn't this the kind of a spreader you want? Then see your nearby International dealer.

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ment mills and blast furnaces.

With the reopening of trade relations with Germany and the easing off of the shipping, there came a check to the further development of domestic potash production. Buyers of potash in this country refrained from placing orders in the hope of being able to secure an adequate supply of German and Alsatian potash at lower prices. As a result of this attitude, the production of domestic potash was in part discontinued. Data at hand show that the production of domestic potash in 1919 was only 32,000 tons against the corresponding production of about 55,000 tons in the preceding year. On the other hand, the movement of foreign potash salts into the United States was not as rapid as had been anticipated, due largely to the disturbed condition of transportation in Germany and France, the lack of coal, strikes in the potash mines, etc. However, the supplies since the spring of 1920 have been growing larger, while the prices have held fairly firm. During the present summer potash in kainit and manure salts has been quoted at wholesale at about $2.20 to $2.25 per unit, and in muriate at about $2.40 to $2.50 per unit. Potash in the form of sulfate has been quoted at $3.25 to $3.50 per unit. It seems, therefore, that potash may be bought at wholesale at about 11 to 12 cents per pound in kainit, manure salts and muriate of potash. This would represent about one-third of the cost of potash in 1917-1918..

The potash outlook for 1921 from the standpoint of supply is good. From the standpoint of prices it is uncertain, in that it is difficult to foretell whether there will be any material reduction for the spring trade. It is believed by many of the mixers and manufacturers that some reduction will be made, and that there is a possibility of lower prices for the spring of 1921—surely for the fall of 1921. The questions as to the ability of manufacturers in the United States to meet foreign competition is still an open one. It is possible that the producers of potash in Germany and in Alsace will enter into an agreement to maintain prices. Otherwise, the competition between the potash producers in Germany and France is bound to lead to a very marked reduction in the cost of potash to farmers in this country. The supplies of potash in Germany are so large and the need for ready cash so great as to compel the potash miners in Germany and France to get all they can out of the American market, which represents their best customer.

It is estimated that at the present rate of consumption Germany alone could supply the world's potash requirements for a period of two thousand years. The deposits of Alsace are not as large, but even they are equivalent to 300 million tons of pure potash. Deposits of potash occur also in Spain, Galicia, Chili and Abyssinia. Of the domestic sources of supply, the Searles Lake District of California is, so far as is known, the most important. It is estimated that this district contains potash equivalent to 20 million tons. Unfortunately, the brines of the Searles Lake District, carrying the potash, are also rich in borax. Considerable injury was done to crops in 1918 on account of the high borax content of the Searles Lake potash salts. Within the past year arrangements have been made to remove the borax, and there is no occasion to anticipate any crop injury from the very small amount that may be present in the potash derived from Searles Lake.

As we look back on the experience of the past five years we have reason to feel grateful for the many important facts learned in connection with the use of potash. Not only have we learned to use it more economically and more effectively, but have learned to appreciate how intelligent fertilization with potash may permit us to increase yields, to improve the quality of certain crops and to reduce injury by plant diseases and injurious insects.

Milton Whitney, Chief of the Bureau of Soils

UNCLE SAM'S HIRED MEN WHO SERVE YOU

The Man to Whom Soil Is a Living Thing—Milton Whitney, Chief of the Bureau of Soils

Some years ago a group of highly respected men in the United States predicted one things concerning the soil of this country—that before long it would be barren wastes. It was a very alarming and gloomy picture and caused quite a deal of discussion. The prophets called upon a certain scientist of the United States Department of Agriculture, an expert on soils, to write a paper for them on the subject, expecting, of course that he would back up their theory.

This man was Milton Whitney, now Chief of the Bureau of Soils. Now Mr. Whitney had some ideas of his own on the matter. He prepared the paper, but he took some issue with the gentlemen in question, and pronounced a theory directly opposed to theirs. His doctrine was summed up thus:

"The soil is the one indestructible, immutable asset that the Nation possesses. It is the one resource that can not be exhausted; that can not be used up. It may be impaired by abuse, but never destroyed."

This does not mean, says Mr. Whitney, that there have not been individual failures through poor management of the soil by individuals or communities. There are many failures in all industrial and commercial life, and the farmer is not exempt from similar limitation of capacity necessary for success.

Researches of the bureau have shown that the soil is a living thing, in exactly the same way that an animal or a plant is a living thing—it breathes; it has a circulatory system; it has a solution carrying food material similar to the blood of animals; it is the home of the same kind of bacteria, chemical substances and processes as play a part in the animal growth and maintenance; it digests organic matter disposing of the remains of animals and plants through much the same process and with the formation of similar organic products as animals.

The soil, he has found, is subject to fatigue, and in extreme cases to suspension, of all useful activities, according to the treatment it receives and the conditions under which it exists. The soil, therefore, must be properly exercised by plowing and cultivation; it must be properly fed by plants, the remains of which it can digest, and by a rotation of plants, just as the dairyman finds it necessary to vary the feed of his cows to keep them in a high state of production.

Since his appointment as chief of the bureau, Mr. Whitney has been closely associated with all its achievements. The study of soils is not only a profession with him but a hobby. At his home in Washington he has a private laboratory where he delights to spend his odd moments conducting experiments.

Whitney is a native of Maryland, having been born in Baltimore, August 2. 1860. He was appointed assistant chemist at the Connecticut Experiment Station in 1883; and served as superintendent of the Experiment Farm, North Carolina Experiment Station, from 1886 to 1888. In 1891 he was appointed soil physicist of the Maryland Experiment Station, where he remained until assigned to head the Bureau of Soils in 1894.

A SUCCESSFUL COMBINATION

A Diversified Farm

Guy Mayo, who farms 130 acres in the southern part of Mercer County, N. J., about a mile and a half from the little village of Crosswicks and near the junction of Monmouth and Burlington Counties, is proving the possibilities of general farms in that section. He specializes on potatoes and dairying but includes fruit as a sideline. Many farms in the famous Monmouth-Mercer County potato belt have from sixty to seventy per cent of the land in potatoes which furnish the chief cash crop, but on Mayo's farm there are "many sticks in the fire" and potatoes occupy but fifteen to twenty per cent of the land.

Mr. Mayo came to Mercer County seven years ago and has been on the same farm ever since. Of his 130 acres, about ninety are in cultivation. There are two acres in fruit and approximately 25 acres in woodland, with the remainder in pasture. This farm has never been rented and was in a fair state of fertility when purchased by the present owner. The soil is principally of a rich sassafras loam containing some ravel.

Two Acres of Fruit Profitable

The two acres of fruit, consisting of 88 trees of the Ben Davis, Nero, Black Twig and Newtown Pippin varieties, have been more profitable than any other five acres on the farm. The trees are about 30 years old and are in good condition at the present time having been carefully pruned and sprayed in recent years. They yielded during one season about 23,000 lbs. of fruit, which was sold in bulk for 3½ cents a pound. This fruit was used for mincemeat at a nearby factory. These two acres have proved so profitable that the value of an orchard on any general farm is clearly shown, provided the trees are given attention.

Considerable Acreage of Potatoes Grown

Next to the fruit Mr. Mayo believes his potatoes and cows have been most profitable. The past season he grew 12 acres of Cobblers and Green Mountains and 7 acres of Pink Eyes. The Pink Eyes were planted after harvest and the 7 acres yielded 1176 ⅝-baskets. The total cash receipts from the potato crop amounted to $3200, roting having done considerable damage. During the last three years, since potash has not been available, a 5-10-0 mixture has been used on this crop but this year Mr. Mayo intends to use a 4-8-6 mixtures as he believes potash to be a vital element in the producing of large yields of potatoes. The cost of growing an acre of potatoes on this farm, including seed, fertilizers and spraying amounts to about $100 an acre and it is figured that the acre yield averages between $250 and $275 when all conditions are favorable. This crop is handled out of the field and marketed immediately without storage.

Dairying

Mr. Mayo finds it profitable to keep 25 head of Holsteins, about half of them he is now milking. The farmers in his neighborhood do not believe there is much profit in producing milk when feed must be bought, but consider it a good business when the cows can be fed on home grown feed or pastured. On the Mayo farm all the hay raised is fed to the cows and considerable rye is ground up for feed instead of wheat bran. Some cows are being milked at all times throughout the year and the milk is sold at the farm to a local milk dealer, from Trenton. The average production for the year from this herd is estimated at 700 quarts a week and Mr. Mayo figures the monthly profit on his dairy to be $150. He does not charge his labor against this figure nor credit the manure produced as he estimates that the value of manure balances the cost of necessary labor. He also finds it profitable to raise dairy heifers and sell them when about two years old.

Alfalfa, Corn and Cover Crops

Large acreages of alfalfa and corn are produced on farms of this type. Mr. Mayo has never failed to get good crops of alfalfa and on his farm sows the crop between July 15 and August 15 following early potatoes and sometimes rye. He has not failed to get a catch of alfalfa once in 20 times and from 4½ acres in four years has taken off a total yield of 60 tons. He makes three cuttings and generally average 3 tons to the acre. Several acres are planted to corn annually, which is used for feeding to the stock. For the corn all rough manure is used together with 490 pounds to the acre of 3-8-3 mixed fertilizer.

The fertility of the Mayo farm has been kept up by the use of manure and cover crops in addition to the application of fertilizers together with a wise rotation of crops. Lime is also applied when alfalfa is sown. Cow peas are often used for a cover crop being planted after the rye has been pastured off followed with corn the next year. This legume is then used for pasture. Mr. Mayo has had cow peas 5 feet high and has pastured cattle on them up until November 1.

This farm is not necessarily a show farm and the owner does not desire anyone to receive that impression. It simply illustrates the type of general farming being carried on in the central part of New ersey on the soils of the sassafras series.—L. J. Gillam, Mercer Co., N. J.

The joy of Light!

ALL you who supply the country with its food and are known far and wide as the progressive American farmer—all you who have an honest pride in your farm—consider a moment the joy of city light; *brilliant,* instantaneous, noiseless clean light.

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AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880

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Our job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

"The Price of Milk"

FOR THE first time Pennsylvania Farmer is interested in pushing the sale, and especially recommends the reading, of a particular book. That book is "The Price of Milk," written by Dr. Clyde L. King, of the Wharton School of Finance and Commerce, and formerly chairman of the Governors' Tri-State Milk Commission, Federal Milk Commissioner for the Eastern States, and Milk Price Arbitrator for Pennsylvania. Dr. King's work in connection with these important and extensive activities, based upon an exceptional training in economics, makes him the foremost authority on the production and distribution of milk in the United States.

Pennsylvania Farmer makes a special point of emphasizing the need of a greater study by farmers of the business end of farming. It is not enough to know how to breed and feed dairy cows. The most expert farmer in these lines will surely fail if he does not also understand the factors which control the sale and price of his product. So closely are all branches of the business and all sections of the country related to each other that it is necessary for the individual to be well informed upon every phase of the trade if dairymen collectively are to prosper. For this reason, Dr. King's book fills a need that has not heretofore been met.

The author has the happy faculty of making even so dry a subject as economics as interesting as a story book, and "The Price of Milk" can be read and fully understood by anyone. In these times of readjustment and market fluctuations a careful reading of this work by all dairymen would tend to make it easier for them to solve the many difficulties which lie immediately before them. Further information, including a table of contents will be found in the advertisement on page 20 of this issue.

Harmful Advertising Refused

AS WE prophesied last week some of the milk-buying companies of the New York milk district are running paid advertisements in the newspapers that will accept them with the evident intention of creating discord in the Dairymens' League. Pennsylvania Farmer received copy and an order for a two-page advertisement from one of the big milk firms in that district. The advertisement was so worded that it was easy to see the purpose in mind, which was to break up the organization by creating distrust and criticism of the League. It is needless to say that we turned it down flat, altho it would have meant several hundred dollars to have run it. This is but one instance when our principle of standing by the farmer's interests and his organizations requires that we refuse advertising matter which we believe is injurious to the causes of agriculture. Some papers will run the advertisement referred to, and some farmers will be influenced by it to desert the organization and help to break, if possible, the only means at hand of gaining independence from the outside price-dictation.

Farm Credits and Prices

FARMERS are confronted with a lower and still falling market when they come to sell the products of the past year. They made strenuous and successful efforts to follow the advice to produce to the uttermost. It was prophesied that prices would in all probability remain high because of the great need in Europe. But the exchange rates with European countries are so unfavorable that trading with them is impossible upon a profitable basis, and the outlook for heavy exporting during the next six months is not good—at least not in proportion to the needs of Europe. This situation, in connection with the evident effort of grain exchanges and speculators to beat down prices in the selling season, has resulted in a decided slump in market prices. The crucial question is, "What can be done about it?"

Some of the representatives of farmers' organizations met in Washington last week to study the matter and their discussions and demands upon government officials have been more widely published and criticised than is usually the case with farmers' meetings. The demand that the government furnish money or credits so that farmers can hold their products for a time for possible higher prices has met violent criticism, and charges have been made that farmers are asking special concessions for private benefit, and that they are violating their own principle of "Equal opportunity for all and special privileges for none."

The question of securing adequate and reasonable credits is a matter of vital importance to the business of agriculture. Progress has been made recently in this direction in the establishment of the Farm Loan Banks and in the educational work done towards a law establishing a system of personal credits. Both these systems need to be firmly established and amplified. Except for governmental authority and encouragement, such banks are backed and financed by private enterprise and capital, and no charge of special privilege can apply. But we very much fear that the demands now being made for government funds and credit to be used for private or class benefit will militate against the possibility of securing the banking legislation which agriculture needs.

It was to be expected that prices in all lines would fall. In fact, everyone hoped for and demanded lower prices for the things he bought, but desired the prices of things he produced to remain as they were. The inability to get new discounts or an extension of credit started the tumble in prices in all lines. Men lost millions of dollars in sugar, dry goods, automobiles, etc., from the same reason that farmers who must sell their grain at an unsatisfactory price—the inability to get an extension of credit.

We do not share the pessimism of those who prophesy that the business of farming is doomed. Other industries are experiencing losses in the sale of products produced at high cost, and all must lose something sooner or later. We are making no apology for the profiteering and crooked work that has been done, nor for the seeming unjust results experienced. We are only pleading for a fair and intelligent effort to correct errors in fundamental laws and practices so that the business of farming may be more sure and more profitable than in the past. But even in the face of present needs let us not echo Portia's pleading, "To do a great right, do a little wrong."

Farming as a business is not going to the everlasting bow-wows. All signs point to a better public sentiment favorable to farming and, unless we forfeit that public sympathy by unfair demands now, we are coming out of these troublous times, into improved conditions, and with cleaner hands and a clearer conscience than many others.

Our Washington Letter

The special committee authorized by Congress to hold a judicial investigation of the subject of rural personal credits has been appointed as follows: Senators A. J. Gronna, North Dakota; Geo. W. Norris, Pennsylvania; Thomas P. Gore, Oklahoma; George P. McLean, Connecticut; Carroll S. Page, Vermont, and Robert L. Owen, Oklahoma; Representatives Gilbert N. Haugen, Iowa; James C. McLaughlin, Michigan; Gordon Lee, Georgia; Louis T. McFadden, Pennsylvania; Frank D. Scott, Michigan, and Henry B. Steagall, Alabama. Wayne Dinsmore, of Chicago, secretary of the National Society of Record Associations, announces that Dr. Ivan Wright, formerly professor of rural economics at Cornell University and now professor of agricultural economics at the University of Illinois, will co-operate with other economists in studying the various features of the McFadden bill, or a bill along similar lines, and establishing its merits before the committee.

It is evident from their desire to enlist the aid of Dr. Wright and other well known economists in the preparation of a suitable bill, that the promoters of the McFadden bill are willing to accept changes and revisions in the measure now pending in Congress, providing it accomplishes the purpose of giving the farmers an effective working system of personal credits.

* * *

Farmers everywhere are in a state of agitation over the slump in prices of farm products. "It is easy to figure,' says Dr. T. C. Atkeson, Washington representative of the National Grange, "that farmers will lose an amount equal to the war debt if they are compelled to accept present prices." Corn, wheat, cotton and fruit growers, live stock men and other producers are all in the same boat. Price reductions in some lines of manufactured goods have been made, but not to the extent of the fall in farm products, and the individual farmer, being a small producer, feels the drop in prices on the stuff he has to sell much more acutely than does the big industrial concern on the manufactured product. While the farmer is asked to accept a price for his wheat of more than a dollar a bushel below the quotation of a few months ago, a deeper cut in corn, and severe reductions all along the line, the consumer in the city is receiving little benefit from these lower farm prices. There has been little change in the price of bread, clothing and shoes, and in many instances the prices are still going higher. The manufacturer is reducing product in order to hold up the price of his manufactured product, and the dealers seem to have little trouble in securing financial aid to hold their goods until they can unload them without loss. The farmer, however, at a time when he needs financial assistance to enable him to hold his products from the speculators, is given little encouragement from those who have the authority to extend such aid.

A meeting of farmer organizations was held in Washington October 12-14th, to protest against the Federal Reserve Boards' movement to deflate credits at the expense of the producers. Nearly every section of the nation was represented by delegates, including all the associations in the National Board of Farm Organizations, the National Grange, American Cotton Growers' Association, National Farmers' Council, the live stock industry, wheat, corn, potato and tobacco growers and other agricultural interests. Several state comissioners of agriculture, marketing officials, Senators and Congressmen were in attendance and participated in the proceedings. This meeting was probably the most important convention of farmers that has been held in Washington in a long time. The men in attendance were earnest, intelligent men who are determined that the farmer shall have his rights under the law, or at least know the reason why he is denied them. Reports of the delegates from the various sections indicated that the wheat growers, cattle raisers, tobacco growers, apple growers, cotton growers, sugar cane growers and producers of every farm staple were in the same predicament, with prices below cost of production, little demand for their products, and lack of financial aid from the banks their products until wanted by the consumers.

J. S. Wanamaker, president of the American Cotton Growers' Association, in speaking of the purposes of calling the meeting, painted a dark outlook for the farming interests under the policy of deflation now being forced upon the producers by Secretary of the Treasury Houston and the Federal Reserve Board. He read extracts from letters he had received from Secretary Houston last March, in which the Secretary of the Treasury said he did not favor government credits for the sale of raw products to European countries. In these letters the secretary wrote that he did not think "it would be wise for our government to subsidize our farm products by stimulating sales to foreign countries." Mr. Houston also wrote that he did not think it would be wise to hold a conference to discuss the proposition to finance the selling of our farm products in Europe. Mr. Wanamaker recommended that the Federal Reserve system provide credits to enable farmers to market their products without loss; that the War Finance Corporation be put in operation to finance exports, and that Federal officials cease issuing statements which tend to force down the price of farm products. The present policy of deflation he declared, will ruin agriculture. Many other delegates spoke along the same lines, emphasizing the necessity for immediate action.

A general committee made up of representatives of all the staple agricultural interests of the United States after each representative had given an exhaustive statement as to marketing conditions of the product he represented, made a report which showed that conditions were similar as to the fact that the prices now current in the market are below cost of production and that unless some immediate remedy be found to relieve the situation general bankruptcy and ruin are inevitable.

"At the close of the war,' the report says, "the farmers of the country were urged by every sort of propaganda to continue the utmost production as a duty to prevent untold horrors of starvation and nakedness among the nations which had been exhausted by the ravages of war. We were given to understand that no matter how great the production, we could not possibly meet the needs of consumption and supply normal reserves in a single year and that therefore we could expect prices that would well repay the high cost of equipment, materials and labor.

"We are convinced that the situation was not overstated. The world supply is unusually small. The fact that we are facing prices today that are below the cost of production arises out of the fact that while the Federal Reserve system was found adequate to finance our allies and ourselves during the greatest upheaval the world has ever seen it is arbitrarily witheld from asisting the basic industry of this country to maintain a level of prices that at least meets the cost of production.

"In our judgment it is wrong as a matter of policy, artificially to press down the prices of commodities, and it is particularly wrong to begin with the raw commodities, for such a programme inevitably forces upon the producer the heaviest burden of reconstruction and readjustment. The condition of agriculture is now desperate. The condition of mind of the farm population is ominous. Producers of all crops have come to feel that the hand of the government is against them. This state of mind can only be changed by a frank and fair attitude on the part of those in authority—the test of which can be only their acts. After a full and free discussion of the situation the conclusion was reached that the present situation is brought about by the following acts:

"1. Restricting of credits.

"2. Raising the rate of discount on farm products.

"3. Discontinuance of the War Finance Corporation.

"4. The statement given out by the Secretary of the Treasury, the governor of the Federal Reserve Board and the Federal Reserve Banks have been construed to the effect that commodity prices, particularly prices of farm products, were too high and that a pre-war basis, or an approximation of a pre-war basis of prices must be reached within a short time. The consequent effect of these utterances upon the member banks of the Federal Reserve system and the banking interests of the country generally was to cause them to withhold such accommodations as they might have otherwise extended, because of the fear that the security taken would necessarily decline.

"5. The action of the Federal Reserve Board in counting the bonds held by member banks as part of the commercial credit of the banks holding these bonds, thereby enormously decreasing the power of such banks to extend the needed credits to the agricultural interests of their respective communities."

The committee felt that the officials of the Treasury Department and Federal Reserve system had exceeded their authority when they publicly announced opinions as to prices of farm products which have resulted in disastrous price declines. It recommended that the Federal Reserve officers and officers of the Treasury Department shall desist from issuing statements as to their opinions as to prices, and their attitude toward the trend of commercial events. They urged that the rate of discount for the orderly marketing of agricultural products shall be made as low as sound business will justify, and that paper accepted by a member bank and offered for re-discount shall be accepted.—E. E. Reynolds.

HARRISBURG LETTER

State Moves to Help Growers.—The Commonwealth of Pennsylvania took the unusual step of holding a general conference of men interested in the growing, shipping, handling, distribution and sale of produce a faw days ago as a means of preventing waste of a part of the greatest apple crop ever grown in the Keystone State and advanced its policy probably farther than has ever been done before. Secretary of Agriculture Fred Rasmussen, who called the meeting, remarked that he used the powers of his office and probably some which he did not have to get the people most vitally concerned together. The results appear to have been very satisfactory as far as reaching an understanding go, altho the means to end the danger of waste will have to be worked out. The important thing about the conference was that the state got the people dealing with the apple crop and its distribution together and has offered to stand behind any movement that will get the tremendous yield from the trees to the market basket of the Pennsylvania housekeeper at a price fair to both. One of the ideas, which seemed to meet most favor, was that people should be educated to use apples more extensively and to buy in larger quantities. The results of the meeting may have far reaching consequences at the Capitol.

The School Appropriation.—Approach of the election is causing more discussion of the educational appropriation and as the state's program for advancement of opportunities is unfolded it is being realized at the State Capitol that millions are going to be added to the appropriation list which were not thought of two years ago. The state revenue for the two legislative years with which the next general assembly will deal may be $120,000,000, maybe $10,000,000 more. Education, forest expansion, road maintenance and other governmental agencies are going to be foremost and it is going to be a struggle against the charities not supported by the state, which have not been idle in getting their legislative candidates into the efild. Further taxes are going to be unpopular at the Capitol it may be added.

Assessments Rise Again.—The subject of equitable assessments of lands for county purposes has come into prominence at the Capitol and from an unexpected source. The Department of Internal Affairs has issued a statement showing wide discrepancy between methods of assessment of real estate for county taxes in many counties, there being not only no policy in regard to the counties, but some having a range as high as fifty per cent. It is probable that a movement for enactment of some law relative to assessments will be started soon. The situation is one which has been much complained of, but which the state has left to the counties with the usual result of lack of uniformity.

The Seed Proposition.—State officials, who are working out the plan for seed certification, say that farmers are commencing to realize just what supervision over seeds will mean in dollars and cents, just as the results of the state's effort to stamp out hog cholera are commencing to be understood. The loss due to importations of foreign and other seeds unsuitable for this part of the country is running into many thousands of dollars annually in Pennsylvania, especially in clover and similar seeds.

NEW JERSEY LETTER

Big Apple Crop.—Declaring that the apple crop this year in New Jersey will surpass all estimates for its size and break all previous records, Alexis L. Clark, chief of the Bureau of Markets of the State Department of Agriculture, has praised the plan that has been adopted by many important manufacturers in buying this kind of fruit in bulk and selling it to their employes at farm prices. Mr. Clark has stated, that, by a somewhat similar arrangement, co-operative buying directed by womens' clubs has made it possible to sell thousands of bushels of apples in industrial centres of the state within recent date at growers' prices plus only the transportation charges. "Apples are so plentiful, that no family is too poor to enjoy this splendid and healthful fruit during the fall and winter," Mr. Clark said in a discussion of the marketing situation, "the main problem is to get the apples to the consumer without too much overhead charge added to the farm prices." Director Clark is urging the buying of apples in quantities by consumers. He has quoted prices sent to him by clubwomen of the state, showing, that while apples are being sold on the farms at from $1 to $1.25 per bushel in bulk and marketed under the community buying plan at these prices, plus a few cents a bushel for truck transportation to the populous centres, apples of the same grade sold in quarter-peck quantities have cost consumers in some cities within the past few days from $4 to $6 per bushel.

NEW YORK LETTER

The Tuber Blight.—It is estimated that the potato yield in New York state fell off 662,000 bushels in September, from late blight ravages. This makes the state's total yield 1,518,000 bushels less than in 1919. Every other eastern state shows a decrease in the estimated yield. All western states show an increase, excepting Michigan, which grows more tubers than any state excepting New York. The Michigan crop decreased 164,000 bushels. New York growers are receiving 28 cents a bushel less than the average price for the country and 41 cents less than the price last year at this time.

The fact that the big sweet potato crop is holding up better than last year is expected to help the white potato market. White potatoes are now an average of 26 cents a bushel cheaper than sweet potatoes and more popular with consumers.

Farmers' Cash Incomes.—The Department of Agriculture announces that studies of farm profits show that most farmers in recent years have made less than $500 yearly cash income over and above the things the farm produces toward the family living. Only two per cent makes a labor income of over $500 a year while 15 per cent have failed to make any labor income at all. Ten per cent failed to make even 5 per cent interest on investment in any year of the study. This accounts for 27,000 empty farm homes in New York state.

Deplorable Dairy Situation.—At a big farm, stock and equipment auction sale this week in Herkimer county the dairy brought what is now regarded as an unusually good price. Thirteen milk cows were sold at an average price of $52.50 each. Ten 2-year-old cows brought from $39 to $62, prices of older cows ranging from $26 to $87. A bull sold for $50. A fine heifer of the dairy type will not bring as much as a good veal calf. An ordinary dairy cow is a drug on the market. The hay crop is very short and the milk market ruined for the time being. The Dairymens' League has secured 35,000 of the needed 50,000 signatures of producers agreeing to pool the proceeds of all milk sales after October 1. Such sales to be divided so as to protect producers whose market was ruined by the refusal of the manufacturers of condensed milk to take any milk at any price for at least three months.

FARQUHAR

Above is a Farquhar Cornish or "Slab Burner," the economical outfit for driving Sawmills. An easy steamer, producing dependable power from offal lumber and sawdust.

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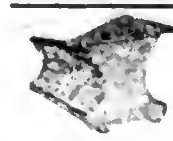

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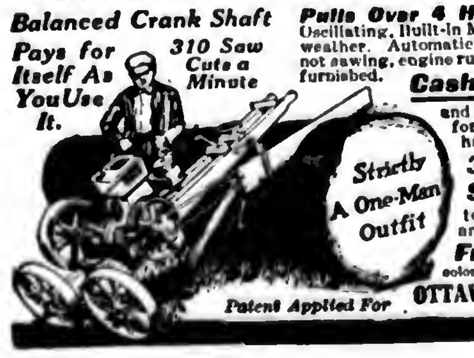

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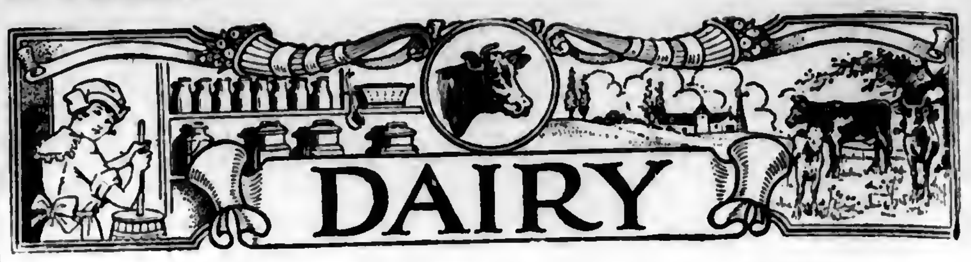

Dairy Calculation

IT PAYS TO USE THE PENCIL

Perhaps nothing is so irksome to the farmer after he has been hard at work all day than to sit down in the evening and do some figuring and keep detailed accounts. Unless one is especially trained in bookkeeping and takes a natural pleasure in such things, it is quite a tiresome task to keep even simple farm accounts. However, it is safe to assume that many dollars have been lost on the farm thru the failure to take a few minutes to do some careful calculation to know just what form of marketing the product would be the most profitable.

This is especially applicable to dairying, for dairy products may be sold in a number of forms and very often it happens that one form may result in twice the profit that could be derived from any other; and where there is choice in the form in which the product may be marketed it is only a matter of business efficiency to carefully calculate which will be the most profitable. Even the small farmer with only a few cows if he has a choice of markets will find that it will pay him to take a pencil and paper and figure out the comparative profits in selling whole milk, cream on either the fat basis or for retail trade, or to make butter.

For example, several years ago in my capacity as a cow tester I was testing the herd of one of my members who sold half of the milk produced from ten cows as whole milk and made butter from the rest of it. He was getting 7½ cents a quart for the milk and 50 cents a pound for the butter, which was of very good quality. His butter price was 5 cents a pound more than ordinary country butter. The farmer's wife was proud of the butter she was making and would have made all the milk into butter if she had had a market for it. It happened that one day when I was testing the herd and found the average test to be 4.1 per cent of butterfat, the farmer's wife asked me how much butter she ought to get from the hundred pounds of milk which she was separating.

I took a pencil and by simple figurin showed her that 100 pounds of milk at 4.1 per cent fat would contain 4.1 pounds of fat and that in making butter there is an overrun or about one-sixth, due to the buttermilk, water and salt. To the 4.1 pounds we therefore add 4.1 divided by 6 (which is 0.68) making a total of 4.78 pounds of butter. With the butter at 50 cents a pound and allowing 60 cents a hundred pounds for the skim milk which was then a good price, the product would be worth $2.99. If the 100 pounds had been sold as whole milk, it would have been worth $3.45, and for the whole month the good farmer's wife was losing about $13 by making butter, even if we grant that all conditions of ripening of the cream and churning were correct enough to get all the fat out of the cream.

In this case it happened that half of the milk had to be taken to the station anyway and it would not have cost any more to take all of the milk to the station. Both the farmer and his wife thought they were making more profit by making butter, and if they had done a little figuring they would have discovered their mistake. This example is typical of cases on many farms, and indicates that if milk producers are to receive the greatest profit from their products they must be able to and must take the time to do some simple calculation.

In order to intelligently market dairy products it is absolutely necessary to know the butter fat test of not only the milk from individual cows to keep a production record with them, but also of the milk of the whole herd to get the average test, and also of the cream. It often happens that it will pay better to sell milk from high testing herds as cream on the fat basis or to make butter, than to sell as whole milk. Very often milk dealers will not give full credit for high butterfat tests and as a general rule it will pay better to sell milk from Jersey and Guernsey herds in the form of cream or butter. Low or medium testing milk will pay better as whole milk, altho invariably a good producing herd even if the fat test is not high, will yield a goodly amount of fat, simply because the amount of milk is very large. And in that case more milk is available for feeding purposes. If the above milk had tested 5 per cent instead of 4.1, then buttermaking would have yielded a greater profit than selling whole milk.

However, not many herds test more than five per cent, and since most farm herds tests below four per cent butterfat, most farmers will do beter to sell whole milk under normal conditions.

Officers of Morris Co., N. J., Fair, and a Prize Cow. Taken in Front of Pennsylvania Farmer Booth

In one herd of 22 animals, which in one month produced over 21,000 pounds of milk, the butterfat test would vary about one-half per cent from month to another, and stay at a certain percentage for quite a while while feed and weather conditions were fairly regular. In such a case, in one month alone there was a difference of 105 pounds of butterfat, which would have made about $85 worth of butter. It is therefore easy to see that it pays to keep close check on the herd with the Babcocks' test and to sit down once in a whole and do a little calculating.—Paul T. Menzel.

WINTER RATIONS FOR COWS

Suggestions which may help farmers in lowering the cost of milk production, are offered by the dairy extension service of the Pennsylvania State College. Based on the lowest possible cost per unit of protein and energy, several rations have been worked out, due consideration being given to palatability, bulk, variety and physiological effect. When the roughage consists of hay, or hay and stover or silage, no legume being used, any one of the following three grain mixtures will be found satisfactory:

(1) One part corn-and-cob meal, one part wheat bran, two parts cottonseed meal and two parts linseed meal;

(2) Equal parts wheat bran, cottonseed meal and linseed meal;

(3) Two parts wheat bran, one part gluten feed, two parts cottonseed meal and two parts linseed meal.

These three rations are also good for late spring and summer pasture. If the roughage used is half legumes, such as clover or alfalfa and silage, or mixed or clover hay and stover, any of the three following grain mixtures will make a balanced ration:

(1) Equal parts corn-and-cob meal, wheat bran, cottonseed meal and linseed meal;

(2) Equal parts ground oats, wheat bran, cottonseed meal and linseed meal;

(3) Three parts wheat bran, two parts hominy feed, three parts cottonseed meal and two parts linseed meal. If the roughage is entirely leguminous, such as clover or alfalfa hay, three other rations of grain are suggested:

(1) Two parts corn-and-cob meal, one part ground oats and one part gluten feed;

(2) Two and one-half parts corn-and-cob meal, and one part each of wheat bran and gluten feed;

(3) Five parts corn-and-cob meal, four parts ground oats, one part cottonseed meal and one part linseed meal. This last group is also recommended as a grain mixture to be used with early spring pasture.

In addition to all the roughage a cow will eat, a Jersey or Guernsey should receive one pound of grain for each 3½ to 4 pounds of milk; a Holstein, Ayrshire or Shorthorn should get a pound of grain for each 4½ pounds of milk.

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But he used his eyes and found his way
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And won a prize when at last he dug him.

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Different kinds of roughage vary widely in nutritive value and as it is necessary to consider both roughage and concentrates that are fed to form a balanced ration, the nutritive standard of the concentrate must vary with variations in the roughage.

Simply feeding more or less of the same grain will not meet the requirements. It is possible in this way to furnish the right amount of protein, *but* in doing so the heat and energy food is thrown out of proportion, and heat and energy food, and other nutrients *are just as important as protein.* Proper balance of *all* is imperative for best results.

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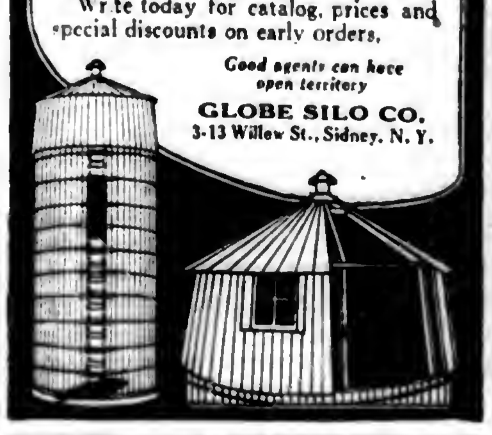

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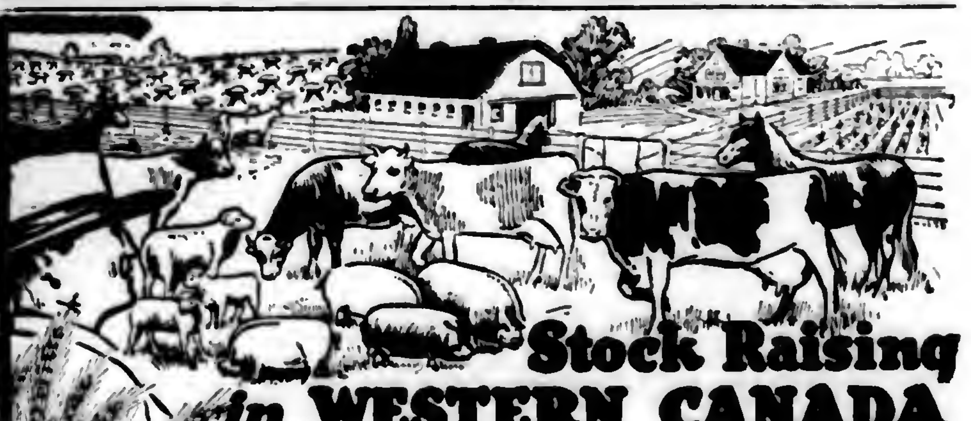

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STORING LATE TRUCK CROPS

In the late fall and early winter it is a common sight to see cabbage rotting in the fields, spoiled pumpkins, and frosted sweets or white potatoes left undug. Adequate measures should be instituted to prevent such losses. Much of the products placed in cellars and stored under heat or in attics are spoiled due to improper storage.

Cabbage is a crop that is easy to grow and when grown late returns money when funds are probably at a low ebb on the farm. Before storing cabbage roots should be loosened in the ground several weeks beforehand. Where the winters are mild and rows are planted north and south a furrow is turned over the heads on the north side, and the cabbage dug out as desired. Where winter would cause alternate freezing and thawing a shallow pit should be dug on high ground and straw placed on rails or old lumber, the heads being placed with roots attached, roots up, three high. A wooden ventilator should be run down into the centre of the heap, and straw thrown on top. As cold weather advances dirt should be gradually added to freezing line depth of the soil. On very cold days a piece of old sack should be stuffed down the vent. Care should be taken in hauling from the field not to bruise the heads as rotting will easily be induced if heads are bruised and the whole pit full may decay.

An Underground Storage Pit for Home Use

You will see many old grandmoms give the winter squash a coat of whitewash and hang on strings in an attic. Where these vegetables are desired for table use this is an excellent way to preserve them thru the winter. The whitewash can be scraped and pared off easily when the vegetable is desired for use. When a large quantity is placed in the attic and it is found necessary to make more than one layer, place a layer of straw on the floor then lay the squashes in rows allowing to touch. Place a good thick layer of straw over this and another layer can be placed in the same manner. Cover the same with plenty of hay or straw.

Squash have to be handled very carefully and must not be deeply scratched or knocked when transported from the field. Pumpkins may be handled in the same way but few people desire to have them in the attic. The hay mow is a good place for them. These can be ranked the same as the squash and they will keep until early spring. Squash and pumpkins should have part of stems attachd when taken from the vine.

When storing white potatoes for winter bins in the cellar should be made narrow and the potatoes should not be heaped too high. All bruised, scarred and soft or bug eaten specimens should be placed in containers and sold as soon as possible. Scabby specimens should not be put in the bins with clean potatoes. The potatoes should not be placed on the dirt or concrete floor but a layer of some hay or even paper should be placed on the floor. A thermometer should hang on the north side of the potato bin and temperature not allowed to go below 32 degrees. A lantern or two placed in different parts of the cellar will quickly raise the temperature, but on one occasion we had to use a small oil stove.

A double door should be placed inside the door leading to the open air, and bagging tacked over windows and places where air can have entry. Air the cellar on days when weather permits. As soon as the price of potatoes reaches a point that will allow a fair profit sell the tubers as quickly as possible. Toward spring the potatoes will shrink and sprout and rot causing extra hours of labor and unless the price is expected to go very high continued storage seldom pays. Potatoes should be sorted as picked up so that firsts and seconds may be placed in separate bins. Do not put damp tubers in storage. Let them dry in baskets if the weather is rainy. Digging the potatoes in heavy soil often leaves dirt sticking to the tubers. If they are allowed to dry thoroly in the sun before placing into baskets by the time they are dumped into the bins the dirt will have been brushed off.

The house for storing sweet potatoes should be heated a few days before the tubers are dug so it will be dry and warm when the potatoes are placed in it. Separate bins should be built for different sizes. The house should be kept at a temperature of 85 degrees until ten days after all potatoes are stored. All scarred, cut, bruised, or diseased specimens should be sold direct from the field. The greatest care has to be exercised in handling the tubers from the time they are dug until stored. Bruising will immediately start decay in the bins. When they have all been stored for ten days the temperature of the house can be reduced to 60 degrees and kept around 55 degrees except in cold weather when a few extra degrees higher will help keep out the cold in the far off corners and near the roof if the potatoes are piled high in the bins.

When once a bin has been opened the quicker the potatoes have been disposed of the better, as handling soon starts rot. Where there is plenty of space many growers store in hampers or crates.

Lima beans, field beans, and peas should be kept in the pods until used as weevils will not be so apt to destroy the beans. Many farmers make a practice of pulling the whole vine and placing in some out of the way place in the barn and when a mess is desired he flails out enough to do for a month or so. This is an excellent plan when it can be carried out.

Beets and carrots may be stored in cellars or pits. Precautions must be taken that they are placed in a dry place when buried. When put in the cellar cover the roots with most sand.

Celery should be harvested as soon as the plants are of marketable size. Cold frames well banked and the sash covered is one of the best places to store celery.—James E. Toomey, New Jersey.

HORTICULTURE

"THE JAPANESE BEETLE"

At Riverton, New Jersey, an entomological laboratory has been established with a corps of thirty some college men whose purpose and work is the study and elimination of the Japanese Beetle under Government supervision. This troublesome pest arrived here several years ago from Japan and is causing some uneasiness among truck growers and farmers located in 15,000 acres of infested area. It has been found in large numbers in Burlington and Camden Counties, where it has preyed upon the flowers, shrubs, nursery stock and vegetables. That the beetle is a real menace to other sections of the country has been proved by its ravages in the territory where it is now confined and the fact that it can fly long distances.

Every effort is being made by the men who are fighting it and studying its habits to exterminate it. The Japanese beetle is a beautiful insect, about the size of a potato beetle, but more elongated. The head and thorax are shining bronze green and the elytra, or wing covers, are brownish, tinged with green at the edges. On the sides and at the tip of the abdomen usually not concealed by wing covers, are conspicuous white spots which distinguish this species from all others of the same size and habits occurring in New Jersey.

Men are assigned each day to certain farms where they inspect all produce to be sent to the markets, and a certificate is not issued until the stuff is known to be as near free of the beetle as it is humanly possible to determine. A number of the men are out each day scouting for new advances the beetle may have made, and they are combatted accordingly.

The grub of the beetle grows in the ground crawling up and out on leaves and shrubbery and finding refuge along the roadside where it is easily carried by a passing vehicle and transported outside the infected area. To overcome this possibility these sections have been cleared and burned to the ground and the ground saturated with arsenate and other poisons. Near Torresdale on the Pennsylvania side of the Delaware, scouts have only recently found evidences of its work. It seems to prefer a diet of decomposing roots and compost. They have been observed feeding on the roots of dock, plantain, timothy, bluegrass, corn, rye, wheat, clover, dandelion, willow and violet elder, as well as on many varieties of trees including apples, so their potential destructiveness is really very great.

The life cycle of the insect is one year, most of which time is spent in the soil, excepting the warm months. They are omnivorous, resistant to unfavorable conditions, strong fliers and very active during warm clear days. They choose grassy or weedy ground, unshaded by thickets or trees, in which to lay their eggs and prefer moist, loamy soil to dry sandy soil, or swampy areas.

Future plans to prevent the spread of the insect have been worked out as follows: 1. By scouting, to establish as far as possible a limit to infestation. 2. By establishing a barrier. 3. By treating roadsides in such a way as to prevent the beetles from getting out of the area; also by killing the grubs in the ground.

No absolutely effective poison has as yet been found which will kill the beetle, because it likewise destroys the plant and the beetle is repelled by it.

Nine Varieties of Dahlias Exhibited at an Ohio Grange Meeting

The fight now being waged against the beetle is of great economic value. It has been fairly well confined to the section where found and while some few beetles have been found in Pennsylvania, effective measures are being used at present to stop it. The New Jersey farmers as a rule are very helpful in giving every assistance possible in order to try and rid their farms of the pest as this section of New Jersey is one of the best sections in the United States.—C. H. Thomas.

APPLES MATURE SLOWLY IN A COOL STORAGE

Storing apples in cool, dark basements soon after picking helps to keep the fruit in the best of condition. A good method is to allow the crates or barrels of apples to remain in the orchard over night—then place them in storage each morning of the picking season.

Apples piled under trees and exposed to the sun ripen quickly. In storage apples will ripen slowly and with minimum waste.

Some varieties like Russet, Mann, Ben Davis and Black Ben are improved by burying in pits as these are long keepers and require a long storage period to make them palatable.

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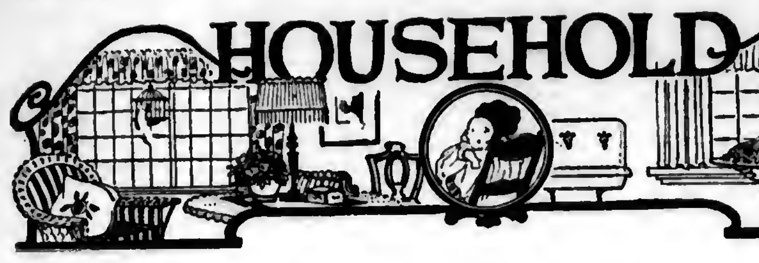


FARM CONVENIENCE TRAIN

Go See What It Has to Show You

The Erie Railroad for a few weeks this fall is running a train that is proving of tremendous interest to farm folks along the line. A good many of our subscribers in New York, northeastern Pennsylvania and northern New Jersey will have a chance to visit this train, and compare various appliances for helping to do work in the farm house and about other farm buildings. Ask your station agent when the train will be at your station if you live on the Erie Railroad. And if no stop is scheduled for a stop at your town, quite likely a stop will be arranged if enough people in your locality desire it. So get busy about it at once. The train started at the western end of the Erie lines in Indiana Sept. 27 and will end at Suffern, Orange County, New York, Nov. 1.

School Let Out at This Place So the Children Could Inspect the Modern Farm Home Equipment on the Erie Railroad "Farm Con venience Special"

The schedule for the Pennsylvania Farmer localities thru which this train will run are: Beginning in New York at Wayland, Steuben County, Saturday, Oct. 23, it will run to Bath; Monday, Oct. 25, it will run from Hammondsport to Corning; Oct. 26, from Big Flats to Waverly, Chemung County; Oct. 27, from Smithsboro, Tioga County, N. Y., to Susquehanna, Pa.; Oct. 28, from Deposit, Broome County, N. Y., to Port Jervis, Orange Connty; Oct. 29, from Sussex, N. J., to Blairstown; Oct. 30, from Columbia, N. J., to Stroudsburg, Pa.; Nov. 1, from Middletown, Orange County, N. Y., to Pine Bush, then to Goshen; Nov. 2, from Pine Island, Orange County, N. Y., to Montgomery, to Washingtonville, to Suffern.

Car. No. 1 is fitted up to represent a living room, with easy chairs, and is lighted entirely with the "juice" from one of the farm electric lighting plants exhibited on the train. From this room you pass into a section of the care showing first a 5-horsepower electric plant running a line shaft that supplies power to operate a feed grinder, cream separator, milking machine, two water systems and at the same time charge a 16-cell storage battery. One of these water systems shows how water is pumped from the well or cistern into a tank, where the air pressure forces it over the house and barn and to other places about your yard where you want it. The other water system shows how air under pressure in a small tank operates pumps in your well and cistern, bringing fresh water directly from each to the faucets. There is just one thing about these water system exhibits that we missed, and that was an illustration of how a hot water tank can be connected to a water back in the range or furnace, and also to a small kerosene heater for heating the water when one does not have a fire in the furnace or kitchen stove.

Also in this car is a smaller 1000-watt electricity plant running a vacuum sweeper, washing machine and wringer and an electric flatiron. Both of these electric plants are water-cooled. Several portable motors show how one motor will serve several appliances, thus doing away with the expense of a motor for each one.

Car No. 2 is extremely interesting. It contrasts old and modern ways of doing various kinds of house and farm work. On the wall are life-size figures, first of a man milking a cow by hand; he pulls tediously at the teats, while just in front of him on the car floor is a milking machine operating by electric "juice." Next comes, on the wall, a life-size figure of a woman laboriously turning the crank of a separator by hand; in front of her electricity is running a separator evenly and quietly. Next is the figure of a woman cranking a barrel churn by hand, and in front of her electricity is doing the same thing so much easier. Next comes a farmer operating a grindstone with a foot pedal in contrast with the little portable motor doing the same thing at a very small cost. Next is a woman wearily rubbing clothes on a washboard while the motor washer in front is merrily swashing the dirt out of the clothes at much less expense of vitality. Then comes a woman ironing with an old-fashioned stove-heated flatiron, tho right in front of her an electric iron is at her service. And then comes that woman, so tired-looking, swinging a broom, tho right at her hand is an efficient helper in the shape of a motor-driven sweeper. The electric plants in this car are air-cooled, and require little room.

The third car machinery is also operated by an air-cooled type of electric plant. This car is partitioned to represent first a dairy, with a portable milking machine, separator and a dasher churn, all in full swing. A water-air pressure water tank, with motor-driven pump supplies the water for this farm home. The complete bathroom is supplied with water from the pressure tank. And a life-size model of a sewage tank attracts a great deal of interest. In the laundry room are shown two stationary tubs with water coming from the faucets; and nearby is a washing machine showing thru its glass sides just how the water is forced thru the clothes. A feature of this room is the machine ironer, run by electricity and heated by an oil burner. "Just think how easy this ironer would do my sheets and all the flatwork," we heard many women say as they inspected it.

The fourth car is an ordinary day coach, at one end of which is a picture screen for use of the state university lecturers who travel with this train. In New York state there will be men and women from the faculty of New York Agricultural College to talk on home and farm equipment principles and practices. Penn State University instructors will travel with the train in Pennsylvania, and New Jerseyites will meet lecturers from their own state college. The train is in charge of Luther Fuller, general agricultural agent of the Erie Railroad, and H. B. Rogers, agricultural agent for the Jamestown to New York section. The Pennsylvania Farmer household editor spent a day with the train recently in order to find out how worthwhile it would be for our readers to visit the train. And our advice is to go by all means, and ask all the questions that you want to of the people in charge of the exhibits. This is a splendid chance to compare the advantages of different makes of appliances for easing farm and home work. Never mind if you are not able to put in any of these conveniences just now, better go and see them, and talk with the folks in charge of them, so that when you are ready to put in one or more of them you will be intelligently familiar with their principles. Most of the schools along the route were closed, while the train was at the station, and teachers and pupils were interested observers. Many a point in physics and mechanics and farm equipment was made ever so much plainer to these youngsters by their visit to the train.—Harriet Mason.

"If We Had Electricity, the First Thing I'd Get Would be a Motor Washing Machine," Said Many of the Women Who Passed Thru the Train

HALLOWE'EN MENU AND DECORATIONS

For the decorations why not make your house simulate a forest? Fasten branches of trees with the colored leaves on them all around the front doorway, and hang a sign above the steps reading thus: "Hobgoblins' Roost." Fasten a few false faces among the leaves of the branches. Have a pumpkin jack-o-lantern on each gate post, also one hanging above the steps. Have some one with a jolly-looking jack-o-lantern head let the guests in. This pumpkin head could be a small, medium-sized, or large pumpkin, as your fancy or convenience best suits for fastening it on the head. It is best secured by sewing it to an old hat brim; if it is a large pumpkin it could be slipped on over the crown, the top of which should be cut to make room for the lantern, which should be a small electric or a pocket flashlight, for a candle in this movable head would be out of the question. This butler jack-o-lantern should say to the guests as he lets them in:

"Hail, goblins, all hail!
From the moor and the swale.
Go along with the bats
And skin off your wraps.
Thence off thru the 'yarbs'
And hunt for your pards."

The invitations, printed on corn husks and enclosed in manila paper envelopes, should read:

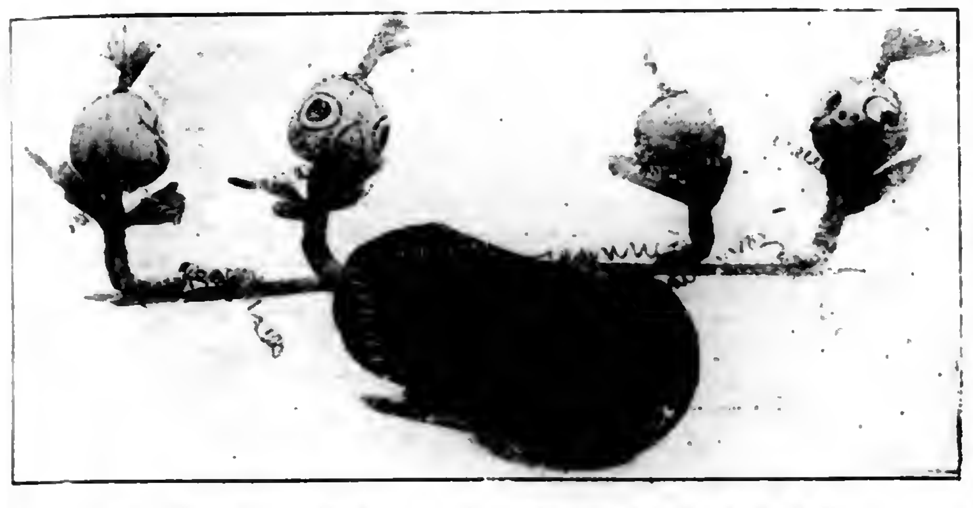
Please sneak over to the Hobgoblins' Roost (at the John H. Miller farm) about 7.30 P. M. Hallowe'en night for a frolic and a snack. Be any kind of Hobgoblin that you desire.

(Signed) The Miller Goblins.

The bats referred to in the greeting should be several small children with black hoods and black cloth drapes brought out to their finger tips so that they can be flapped like wings as the children skip along ahead of the guests to show them to the "unwrapping" room. The children should squeak out "This way" as they start off with the fresh arrivals.

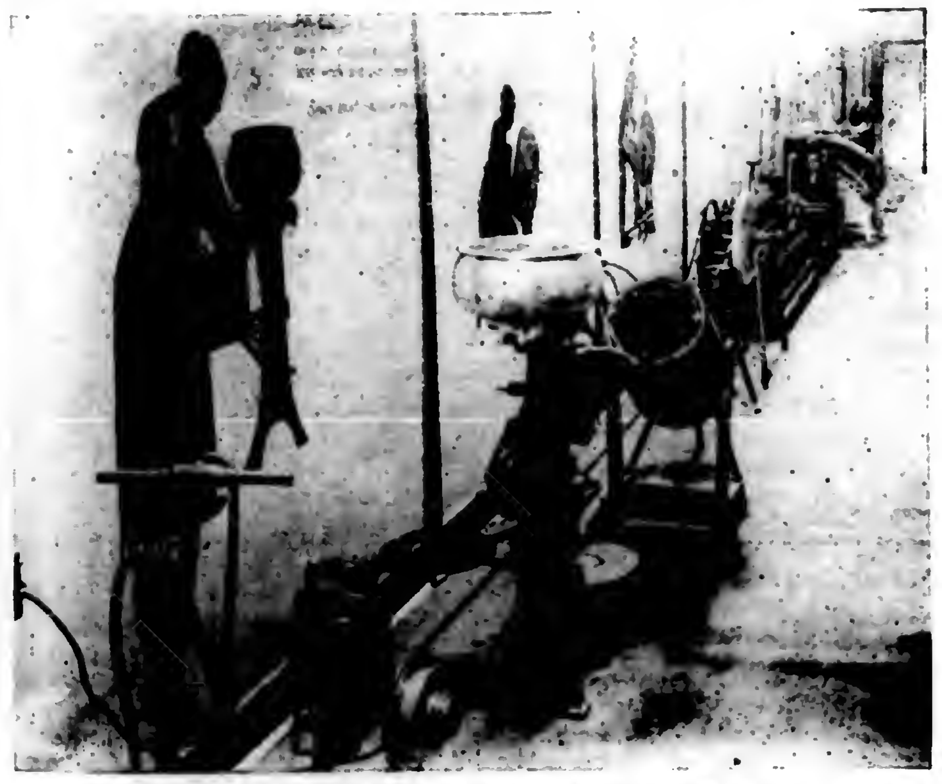
The house should be made as "woodsy" as possible with the branches. Cornstalks could be used sparingly, but they make such a litter that I would not use them except to fix up a fortune-teller's wigwam in a corner; and also to set around the diningroom walls.

As the guests come from the "unwrapping" room have the bats set them to hunting Jack-o-lantern seeds (pumpkin seeds) under chairs, tables, in corners, under doilies, spreads, on window sills, tops of doorways, under rugs, etc., for 10 minutes, the hostess goblin seeing that they stop when their time is up, when they must be taken to the record keeper who counts their seeds and records the number against the guest's name, which may be the goblin name typical of the character represented by the guests' costume. The seeds are put in an envelope, and the guests are told to take these seeds home and raise a crop from them next summer, and see who can get the biggest crop, for which the Miller Goblins will give a prize (anything that you desire).



Red Paper Radishes With Grapevine Tendrils for Tails

In the cornstalk fortune wigwam have a cabbage head witch, whose head is made by hollowing out a big cabbage so that it will fit onto the head, which is covered with light green cheesecloth that falls over the face and figure with eye, nose and mouth holes cut in the head part. This witch should be some one who can think up many absurd fortunes to tell.



Contrasting the Old and Modern Ways of Doing Work on the Farm and in The Farm House

The Menu

When supper time arrives the guests should be invited to come into the corn field and get their fodder. When they arrive in the cornstalk-lined diningroom, they find the table spread with corn husks. At the end nearest them is a big pile of tin trays; each takes one, then gets a plate from the pile next, and on each plate is a folded paper hobgoblin napkin.

Next there should be trays of forks and spoons, followed by a big platterful of sandwiches made of brown bread, preferably with raisins in it, and spread with butter only. Then should come a big platterful of white bread sandwiches with cream cheese filling, followed by a platterful of sliced ham white bread sandwiches.

There should be dishes of pickles, preferably sweet and sour cucumber. Then pie plates of pumpkin pie in generous slices. Baskets of apples, pears, peaches and grapes for the guests to choose from should also be on this cornhusk-spread table.

Then the guests should come next to a place where someone serves them spoonfuls of hot vegetable hash made of diced potato, some of the green peas that you canned last July, chopped celery, a bit of onion and perhaps some green lima beans.

Then next they are served to a glass of sweet cider or grape juice or water, as they prefer; or a cup of hot coffee, cream and sugar, and sent rejoicing on their way back to the "woods" to eat their trayfuls. They are told to come back and get as many helpings as they like.

This serve-self or cafeteria method of serving the lunch will be novel and require fewer waiters. One or two of the helpers can gather up the trays after the "feed" if you do not request the guests to bring them to the diningroom.—Harriet Mason.

WATCH LEAKY ROOFS

Be forehanded. Watch the little leaks in roof or radiator or plumbing. Many a little leak has caused plaster to fall.

MYSTERY GAMES FOR HALLOWE'EN

A "magic game", known as "This and That," requires a confederate who is familiar with the trick. The party who is to exhibit his magical powers goes from the room and the confederate asks the company to choose some object which his partner will designate when recalled. Perhaps it is a chair. The partner is recalled and the confederate begins to ask him questions thus: "Was this book chosen?" The answer is "No." "Well, was it this picture?" Again, "No." "That chair?" This time the answer is in the affirmative, the clue being the use of the word "that" instead of "this" in the question.

Another game which two must conduct is called "Mind Reading." By previous arrangement a certain word or list of words has been chosen by two performers. The confederate proposes, after his partner has left the room, that four of the group each write a word on slips of paper, and fold them so his partner can not see them, and see whether he can read the words. He, of course, makes himself one of the four, and writes the first of the words previously agreed upon. The others write such words as they may think of quickly, and all the papers are folded separately so that the writing is hidden. When the partner returns to the room the confederate hands him the slips, taking especial care to hand his own first, so that the partner may place it between his third and little fingers, placing the other slips between the other fingers. After making a few passes with his hand thus encumbered, he takes the paper from between his thumb and forefinger, rubs its folded surface over his forehead, mumbling to himself meanwhile, and presently mentions a letter, "W," aloud; then "E," "D," "DING," announcing the word after the final rub, "Wedding" and asks who wrote it. Of course, the partner claims that honor, and the reader casually opens the paper and glances at it, thus getting his clew to the next word, and so on thru the list, taking the fingers in turn.

The "dwarf magician" may be utilized for telling fortunes, asking riddles, telling jokes, dancing or playing comical tricks, if practiced well in advance. Two performers are needed in this case also, and they must be placed back of curtains, with a stand or table just in front. One of them puts a child's socks and shoes on his hands, a stocking cap or turband on his head, disguises his face by covering one or two teeth with black court plaster, using long and heavy false eyebrows and a mustache, or possibly an entire false face and wig. The other performers stands behind the first, who by placing his hands on the stand appears to be standing there, and throws his arms around the first, bringing them thru the straight hung brown or gray skirt which has been fastened about the neck of the first, so that they appear as his own hands and arms. Much amusement may be made for the onlookers if these parts are cleverly carried out.—Mrs. Mae Y. Mahaffy.

HOMESPUN YARN

High cost of raiment
 Cannot scare 'em—
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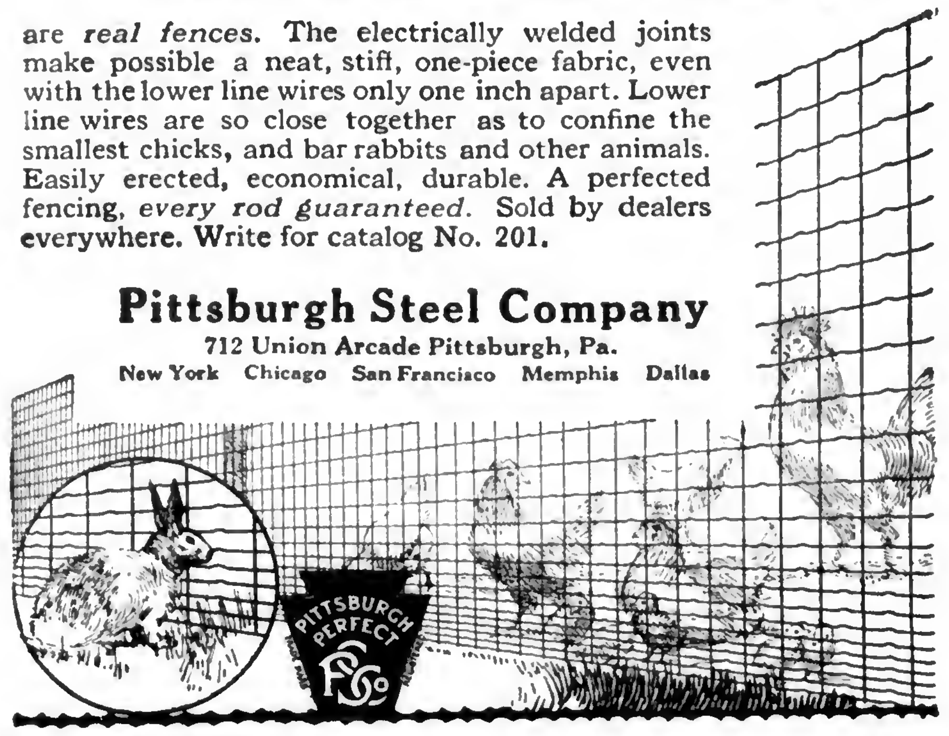

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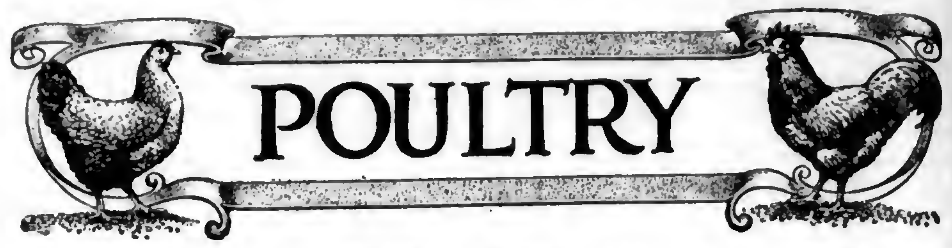


POULTRY

GIRL SUCCESSFUL POULTRYMAN

Grace Hauser, age nine years, of Atlantic Co., N. J., set fourteen hens this spring, and they hatched over one hundred and forty chicks. This little girl cared for the hens and for the chicks when hatched. Brooding them in boxes covered over with old woolen clothes at night, and doing practically all of the work herself (including digging worms for them and greasing them with lard for lice). She lost about twenty-five of them from different causes. The rest lived and she takes great pride in her flock, and loves them as much as any old hen could. She is shown in the picture with as many as could be called together at one time.

GETTING PROSPECTS AT THE FAIRS

It is ten years since I began to display poultry at our country fair. I have learned many things of value as to what is the best manner and the best way of getting prospects for sales. Like many other breeders, I first had cards printed bearing my name and address and a limited amount of advertising matter. These were designed to keep my name before the prospect's mind until he reached home and could then send for my catalog and mating list. I found this method expensive and barren of results. At one fair I distributed over 1,000 of these cards. I was able to trace just three sales to them, which did not pay the cost of the printing. People lose or misplace the cards, forget about them, or are attracted to the flocks of other breeders before you have a chance to get your literature before them.

I realized that a better method must be found. I tried blotters. You know that a person will keep a blotter, regardless of its advertising appeal, until it is worn out. It seemed to me that this would keep the matter before the prospect and that I should get inquiries. But I found the blotter fad to be a rather expensive experiment. The blotters ocst considerable, and while I distributed five blotters to one card yet, I got very few sales that I could trace to them.

Finally it occurred to me that many advertisements pull better if they have a coupon filled out ready for the prospect to sign than, if the prospect has to go to the trouble to write out a full letter. The busier the man, the less likely he is to answer an advertisement, and the man to whom I was appealing was a farmer, perhaps the busiest man on earth. I decided that I must make it easy for him to inquire about my literature.

The postcard was the natural answer to this need. I have them printed up very simply. For the more reading matter you put on a card, the more suspicious certain people are apt to be about signing it. The cards read as follows: "Dear Sir—Please send me your mating list and prices of stock as soon as possible. Name and Address." These cards were placed in little boxes in front of my birds at the fair, and the prospect was invited to "Take One" by a sign in front of the cages. About 75 per cent of my inquiries that come in this way are filled out at the fair grounds and my results have been very good. I would suggest this plan as a very workable and efficient one. —Chas. A. Umoselle, Atlantic Co., N. J.

Grace Hauser Caring For Her Chickens

LATE HATCHED PULLETS

The late hatched pullets are quite a large factor in the egg production of the country because there are so many of them. These birds do not lay until long after the early hatched stock but they often keep at it quite regularly until they have made a fair record for the first year.

To make them work to their best advantage is the poultryman's aim. Late hatched pullets need a growing mash from the start and should never be without it. The early birds do the best when they have mash but it is necessary to enable the late hatched birds to make a rapid growth.

The home grown mashes are all right but if there is no time to mix them it will pay to buy a few hundred pounds of comercial growing mash and keep it before the pullets at all times. These late hatched pullets should be separated from the cockerels and the old hens. This gives them a chance to grow to the best advantage. They will not be crowded from the feed hopper or frightened from the best feeding places on the range.—R. G. K.

A Close Up View of Some of Our Folks

GEORGE HENDERSON, HUNTINGDON COUNTY, PA. WITH HIS HERD OF SHORTHORNS AND THE HEIFERS HE HAS RAISED

I'LL MIND THE COWS SOMEDAY

RUTH HENDERSON, MUCH INTERESTED IN HER FATHER'S SHORTHORNS

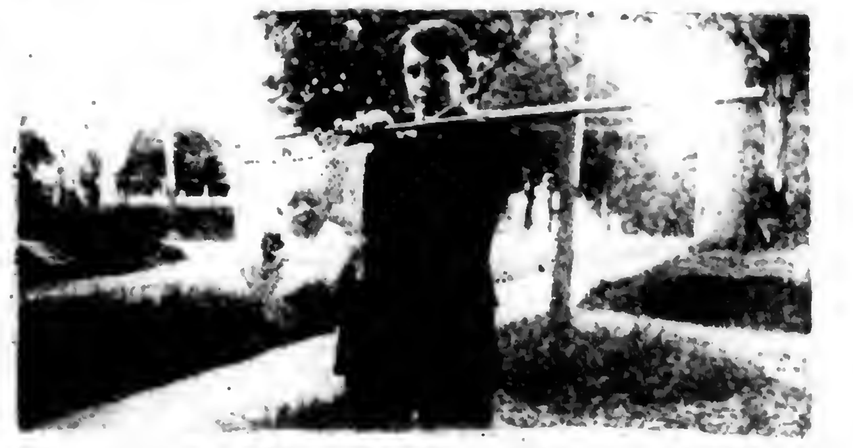
I LIKE SHEEP BETTER

YOUNG AMERICA COLUMBIA Co., PA.

ELLENK HUBER HELPS WITH THE HARVEST FOR THE LANCASTER MARKET

COLUMBIA COUNTY FARMERS BEGIN YOUNG

KIDDIES LOVE FARM ANIMALS



THE BEST CATCH IN COLUMBIA COUNTY

Whispering Smith

by Frank H. Spearman

(Continued from Last Week)

CHAPTER XXXVII

Wickwire

"Sheriff Coon and a deputy jailer started with Seagrue for Medicine Bend this morning. Coming through Horse Eye Canyon, Murray Sinclair and Barney Rebstock got a clean drop on them, took Seagrue, and they all rode off together. They didn't make any bones about it, either. Their gang has got lots of friends over there, you know. They rode into Atlantic City and stayed over an hour. Coon tracked them there and got up a posse of six men. The three were standing in front of the bank when the sheriff rode into town. Sinclair and Seagrue got on their horses and started off. Rebstock went back to get another drink. When he came out of the saloon he gave the posse a gunfight all by himself, and wounded two men and made his getaway."

Whispering Smith shook his head, and his hand fell on the table with a tired laugh. "Barney Rebstock," he murmured, "of all men! Coward, skate, filler-in! Barney Rebstock—stale-beer man, sneak, barn-yard thief! Hit two men!" He turned to McCloud. 'What kind of a wizard is Murray Sinclair? What sort of red-blood toxin does he throw into his gang to draw out a spirit like that? Murray Sinclair belongs to the race of empire-builders. By Heaven, it is pitiful a man like that should be out of a job! England, McCloud, needs him. And here he is holding up trains on the mountain division!"

"They are all up at Oroville with the Williams Cache gang, celebrating," continued Wickwire.

Whispering Smith looked at the cowboy. "Wickwire, you made a good ride and I thank you. You are all right. This is the young lady and this is the man who had you sent to the hospital from Smoky Creek," he added, rising. "You can thank them for picking you up. When you leave here tell Bob Scott to meet me at the Wickiup with the horses at eleven o'clock, will you?" He turned to Dicksie in a gentle aside. "I am riding north tonight—I wish you were going part way."

Dicksie looked at him intently. "You are worried over something," she murmured; "I can see it in your face."

"Nothing more than usual. I thrive, you know, on trouble—and I'm sorry to say good-night so early, but I have a long ride ahead." He stepped quietly past McCloud and out of the door.

Wickwire was thanking Dicksie when unwillingly she let Whispering Smith's hand slip out of her own. "I sure wouldn't have been here tonight if you two hadn't picked me up," laughed Wickwire, speaking softly to Dicksie when she turned to him. "I've knowed my friends a long time, but I reckon they all didn't know me."

"I've known you longer than you think," returned Dicksie with a smile. "I've seen you at the ranch-house. But now that we really do know each other, please remember you are always sure of a home at the ranch—whenever you want one, Mr. Wickwire, and just as long as you want one. We never forget our friends on the Crawling Stone."

"If I may make so bold, I thank you kindly. And if you all will let me run away now, I want to catch Mr. Whispering Smith for just one minute."

Wickwire overtook Smith in Fort Street. "Talk quick, Wickwire," he said; "I'm in a hurry. What do you want?"

"Partner, I've always played fair with you."

"So far as I know, Wickwire, yes. Why?"

"I've got a favor to ask."

"What is it—money "

"No, partner, not money this time. You've always been more than liberal with me. But so far I've had to keep under cover; you asked me to. I want to ask the privilege now of coming out into the open. The jig is up so far as watching anybody goes."

"Yes."

"Theres' nobody to watch any more—they're all to chase, I reckon, now. The open is my kind of a fight, anyway. I want to ride out this man-hunt with you."

"How is your arm?"

"My arm is all right, and there to be a place for me in the chase now that Ed Banks is out of it. I want to cut loose up on the range, anyhow; if I'm a man I want to know it, and if I ain't I want to know it. I want to ride with you after Seagrue and Sinclair and Barney Rebstock."

Whispering Smith spoke coldly: "You mean, Wickwire, you want to get killed."

"Why, partner, if it's coming to me, I don't mind—yes."

"What's the use, Wickwire?"

"If I'm a man I want to know it; if I ain't, it's time my friends knowed it. Anyhow, I'm man enough to work out with some of that gang. Most of them have put it over me one time or another; Sinclair pasted me like a blackbird only the other day. They all say I'm nothing but a dashed tramp. You say I have done you service—give me a show."

Whispering Smith stopped a minute in the shadow of a tree and looked keenly at him. "I'm too busy tonight to say much, Wickwire," he said after a moment. "You go over to the barn and report to Bob Scott. If you want to take the chances, it is up to you; and if Bob Scott is agreeable, I'll use you where I can—that's all I can promise. You will probably have more than one chance to get killed."

CHAPTER XXXVIII

Into the North

The moon had not yet risen, and in the darkness of Boney Street Smith walked slowly toward his room. The answer to his question had come. The rescue of Seagrue made it clear that Sinclair would not leave the country. He well knew that Sinclair cared no more for Seagrue than for a prairie-dog. It was only that he felt strong enough, with his friends and sympathizers, to defy the railroad force and Whispering Smith, and planned now, probably, to kill off his pursuers or wear them out. There was a second incentive for remaining; nearly all the Tower W money had been hidden at Rebstock's cabin by Du Sang. That Kennedy had already got hold of it Sinclair could not know, but it was certain that he would not leave the country without an effort to recover the booty from Rebstock.

Whispering Smith turned the key in the door of his room as he revolved the situation in his mind. Within, the dark was cheerless, but he made no effort to light a lamp. Groping his way to the side of the low bed, he sat down and put his head between his hands to think.

There was no help for it that he could see: he must meet Sinclair. The situation he had dreaded most, for the moment Bucks asked him to come back to the mountains, had come.

He thought of every phase of the outcome. If Sinclair should kill him the difficulties were less. It would be unpleasant, certainly, but something that might happen any time and at any man's hands. He had cut ito the game too long ago and with his eyes too wide open to complain at this time of the possibility of an accident. They might kill each other; but if, escaping himself, he should kill Sinclair—

He came back in the silence always to that if. It rose dark between him and the woman he loved—whom he had loved since she was a child with school-girl eyes and braided hair. After he had lost her, only to find years afterward that she was hardly less wretched in life than he in his, he had dreamed of the day when she might again be free and he free to win a love long hoped for.

But to slay this man—her husband—in his inmost heart he felt it would mean the raising of a bar as impalpable as fate, and as undying, to all his dreams. Deserved or not, whatever she should say or not say, what would she feel? How could her husband's death in that encounter, if it ever came, be other than a stain that must shock and wound her, no matter how much she should try not to see. Could either of them ever quite forgive it?

Kennedy and his men were guarding the Cache. Could they be sent against Sinclair? That would be only a baser sort of murder—the murder of his friends. He himself was leader, and so looked upon; the post of danger was his.

He raised his head. Through the window came a faint light. The moon was rising, and against the inner wall of the room the straight, hard lines of the old wardrobe rose dimly. The rifles were within. He must choose.

He walked to the window and pushed the curtain aside. It was dark everywhere across the upper town, but in the distance one light burned. It was in Marion's cottage. He had chosen this room because from the window he could see her home. He stood for a few moments with his hands in his pockets, looking. When he turned away he drew the shade closely, lighted a lamp, and unlocked the wardrobe door.

Scott left the barn at half-past ten with a led horse for Whispering Smith. He rode past Smith's room in Fort Street, but the room was dark, and he jogged down to the Wickiup square, where he had been told to meet him. After waiting and riding about for an hour, he tied the horses and went up to McCloud's office. McCloud was at his desk, but knew nothing of Whispering Smith except that he was to come in before he started. "He's a punctual man," murmured Bob Scott, who had the low voice of the Indian. "Usually he is ahead of time."

"Is he in his room, do you think?" asked McCloud.

"I rode around that way about fifteen minutes ago; there was no light."

"He must be there," declared McCloud. "Have you the horses below? We will ride over and try the room again."

Fort Street back of Front is so quiet after eleven o'clock at night that a footfall echoes in it. McCloud dismounted in front of the bank building and, throwing the reins to Bob Scott, walked upstairs and back towards Smith's room. In the hallway he paused. He heard faint strains of music. They came from within the room—fragments of old airs played on a violin, and subdued by a mute, in the darkness. Instinct stayed McCloud's hand at the door. He stood until the music ceased and footsteps moved about in the room; then he knocked, and a light appeared within. Whispering Smith opened the door. He stood in his trouseds and shirt, with his cartridge-belt in his hands. "Come in, George. I'm just getting hooked up."

"Which way are you going tonight, Gordon?" asked McCloud, sitting down on the chair.

"I am going to Oroville. The crowd is celebrating there. It is a defi, you know."

"Who are you going to take with you?"

"Nobody."

McCloud moved uneasily. "I don't like that."

"There will be nothing doing. Sinclair may be gone by the time I arrive, but I want to see Bob and Gene Johnson, and scare the Williams-Cache coyotes, just to keep their tails between their legs."

"I'd like to kill off half a dozen of that gang."

Whispering Smith said nothing for a moment. "Did you ever have to kill a man, George?" he asked buckling his cartridge-belt.

"No. Why?"

There was no reply. Smith had taken a rifle from the rack and was examining the firing mechanism. He worked the lever for a moment with lightning-like speed, laid the gun on the bed, and sat down beside it.

"You would hardly believe, George, how I hate to go after Murray Sinclair. I've known him all my life. His folks and mine lived across the street from one another for twenty years. Which is the older? Murray is five years older than I am; he was always a big, strong, good-looking fellow.' Whispering Smith [illegible] his hands on the side of the bed. "It is curious how you remember things that happened when you were a boy, isn't it? I thought of something tonight I hadn't thought of for twenty years. A little circus came to town. While they were setting up the tent the lines for the gasoline tank got fouled in the block at the the top of the centre pole. The head canvasman offered a quarter to any boy that would would climb the pole and free the block. One boy after another tried it, but they couldn't climb half-way up. Then Murray sailed in. I was seven years old and Murray was twelve, and he wore a vest. He gave me the vest to hold while he went up. I felt like a king. There was a lead-pencil in one pocket, beautifully sharpened, and I showed it to the other boys. Did he make good? He always made good," said Whispering Smith gloomily. "The canvasman gave him the quarter and two tickets, and he gave me one of the tickets. I got to thinking about that tonight. As boys, Murray and I never had a quarrel." He stopped. McCloud said nothing, and, after an interval, Smith spoke again:

"He was an oracle for all the small boys in town, and could advise us on any subject on earth—whether he knew anything about it or nothing about it made no difference. I told him once I wanted to be a California stage-robber, and he replied without an instant's hesitation that I ought to begin to practice running. I was so upset at his grasp of the subject that I hadn't the nerve to ask him why I needed to practice running to be a stage-robber. I was ashamed of appearing green and to this day I've never understood what he meant. Whether it was to run after the stage or to run away from it I couldn't figure out. Perhaps my being too proud to ask the question changed my career. He went away for a long time, and we heard he was in the Black Hills. When he came back, my God! what a hero he was."

Bob Scott knocked at the door and Whispering Smith opened it. "Tired of waiting, Bob? Well, I guess I'm ready. Is the moon up? This is the rifle I'm going to take, Bob. Did Wickwire have a talk with you? He's all right. Suppose you send him to the mouth of Little Crawling Stone to watch things a day or two. They may try to work north that way or hide in the wash."

Walking down to the street, Whispering Smith continued his suggestions. 'And by the way, Bob, I want you to pass this word for me up and down Front street. Sinclair has his friends in town and it's all right—I know them and expect them to stay by him. I expect Murray's friends to do what they can for him. I've got my friends and expect them to stay by me. But there is one thing that I will not stand for on any man's part, and that is hiding Sinclair anywhere in Medicine Bend. You keep him out of Medicine Bend, Bob; will you do it? And remember, I will never let up on the man who hides him in town while this fight is on. There are good reasons for drawing the line on that point, and there I draw it hard and fast. Now Bob and Gene Johnson were at Oroville when you left, were they, Bob?" He was fastening his rifle in the scabbard. "Which is deputy sheriff this year, Bob or Gene? Gene—very good." He swung into the saddle.

"Have you got everything?" murmured Scott.

"I think so. Stop! I'm riding away without my salt-bag. That would be a pretty piece of business, wouldn't it? Take the key, Bob. It's hanging between the rifles and the clock. It's the wardrobe key, too."

There was some further talk when Scott came back with the salt, chiefly about horses and directions as to telephoning. Whispering Smith took up a notce again in his belt, pulled down his hat, and bent over the neck of his horse to lay his hand a moment in McCloud's. It was one o'clock. Across the foot-hills the moon was rising, and Whispering Smith straightening up in the saddle wheeled his horse and trotted swiftly up the street into the silent north.

CHAPTER XXXIX

Among the Coyotes

Oroville once marked farthest north for the Peace River gold camps, but with mining long ago abandoned it now marks farthest south for a rustler's camp, being a favorite resort for the people of the Williams Cache country. Oroville boasts that it has never surrendered and that it has never been cleaned out. It has moved, and been moved, up stream and down, and from bank to bank, it has been burned out and blown away and lived on wheels: but it has never suffered the loss of its identity. Oroville is said to have given to its river the name of Peace River—either wholly in irony or because in Oroville there was for many years no peace save in the river. However, that day, too, is past, and Peace County has its sheriff and a few people who are not habitually "wanted."

Whispering Smith, well dusted with alkali, rode up to the Johnson ranch, eight miles southwest of Oroville, in the afternoon of the day after he left Medicine Bend. The ranch lies in a valley watered by the Rainbow, and makes a pretty little oasis of green in a limitless waste of sagebrush. Gene and Bob Johnson were cutting alfalfa when Whispering Smith rode into the field, and, stopping the mowers, the three men talked while the seven horses nibbled the clover.

"I may need a little help, Gene, to get him out of town," remarked Smith, after he had told his story; "that is, if there are too many Cache men there for me."

Bob Johnson was stripping a stalk of alfalfa in his fingers. "Them fellows are pretty sore."

"That comes of half doing a job, Bob. I was in too much of a hurry with the round-up. They haven't had dose enough yet," returned Whispering Smith. "If you and Gene will join me sometime when I have a week to spare, we will go in there, clean up the gang and burn the hair off the roots of the chapparal—what? I've hinted to Rebstock he could get ready for something like that."

"Tell us abou that fight, Gordon."

"I will if you will give me something to eat and have this horse taken care of. Then, Bob, I want you to ride into Oroville and reconnoitre. This is mail day and I understand some of the boys are buying postage stamps to put on my coffin."

They went to the house, where Whispering Smith talked as he ate. Bob took a horse and rode away, and Gene, with his guest, went back to the alfalfa, where Smith took Bob's place on the mower. When they saw Bob riding up the valley, Whispering Smith, bringing in the machine, mounted his horse.

"Your man is there all right," said Bob, as he approached. "He and John Rebstock were in the Blackbird saloon. Seagrue isn't there, but Barney Rebstock and a lot of others are. I talked a few minutes with John and Murray. Sinclair didn't say much; only that the railroad gang was trying to run him out of the country, and he wanted to meet a few of them before he went. I just imagined he held up a little before me; maybe not. There's a dozen Williams-Cache men in town."

"But those fellows are not really dangerous, Bob, though they may be troublesome," observed Smith reflectively.

"Well, what's your plan?" blurted Gene Johnson.

"I haven't any, Gene," returned Smith, with perfect simplicity. "My only plan is to ride into town and serve my papers, if I can. I've got a deputyship—and that I'm going to do right away. If you, Bob, or both of you, will happen in about thirty minutes later you'll get the news and perhaps see the fun. Much obliged for your feed, Gene; come down to Medicine Bend any time and I'll fix you up. I want you both for the elk hunt next fall, remember that. Bucks is coming, and is going to bring Brown and Henson and perhaps Atterbury and Gibbs and some New Yorkers; and McCloud's brother, the preacher, is coming out and they are all right—all of them."

The only street in Oroville faces the river, and the buildings string for two or three blocks along modest bluffs. Not a soul was anywhere in sight when Whispering Smith rode into town, save that across the street from where he dismounted and tied his horse three men stood in front of the Blackbird.

They watched the new arrival with languid interest. Smith walked stiffly over toward the saloon to size up the men before he should enter it. The middle man of the group, with a thin red face and very blue eyes, was chewing tobacco in an unpromising way. Before Smith was halfway across the street he saw the hands of the three men falling to their hips. Taking care, however, only to keep the men between him and the saloon door, Smith walked directly toward them. "Boys, have you happened to see Gene or Bob Johnson today, any of you?" He threw back the brim of his Stetson as he spoke.

"Hold your hand right there—right where it is," said the blue-eyed man sharply.

Whispering Smith smiled, but held his hand rather awkwardly upon his hat-brim.

"No," continued the spokesman, "we ain't none of us happened to see Bob or Gene Johnson today; but we happen to seen Whispering Smith, and we'll blow your face off if you move it an inch."

Smith laughed. "I never quarrel with a man that's got the drop on me, boys. Now, this is sudden but unexpected. Do I know any of you?" He looked from one face to another before him, with a wide reach in his eifid of vision for the three hands that were fast on three pistol-butts. "Hold on! I've met you somewhere," he said with easy confidence to the blue-eyed man with the weather-split lip. "Williams Cache, wasn't it? All right, we're placed. Now what have you got in for me?"

"I've got forty head of steers in for you," answered the man in the middle, with a splitting oath. "You stole forty head of my steers in that round-up, and I'm going to fill you so full of lead you'll never run off no more stock for nobody. Don't look over there to your horse or your rifle. Hold your hands right where they are."

"Certainly, certainly!"

"When I pull, I shoot!"

"I don't always do it, but it is business, I acknowledge. When a man pulls he ought to shoot—very often it's the only chance he ever gets to shoot. Well, it isn't every man gets the drop on me that easy, but you boys have got it," continued Whispering Smith in frank admiration. "Only I want to say you're after the wrong ma.n That round-up was all Rebstock's fault, and Rebstock is bound to make good all loss and damage."

"You'll make good my share of it right now and here," said the man with the wash-blue eyes.

"Why, of course," assented Whispering Smith, "if I must, I must. I suppose I may light a cigarette, boys, before you turn loose the fireworks?"

"Light it quick!"

Laughing at the humor of the situation, Whispering Smith, his eyes beaming with good-nature, put the finger and thumb of his right hand into his waistcoat pocket, drew out a package of cigarette paper, and, bantering his captors innocently the while, tore out a sheet and put the packet back. Folding the paper in his two hands, he declared he believed his tobacco was in his saddle-pocket, and asked leave to step across the street to get it. The trick was too transparent, and leave was refused with scorn and some hard words. Whispering Smith begged the men in front of him in turn for tobacco. They cursed him and shook their heads.

For an instant he looked troubled. Still appealing to them with his eyes, he tapped lightly the lower outside pockets of his coat with his fingers, shifting the cigarette paper from hand to hand as he hunted. The outside pockets seemed empty. But as he tapped the inside breast pocket on the left side of the coat—the three men, lynx-eyed, watching—his face brightened. "Stop!" said he, his voice sinking to a relieved whisper as his hand rested lightly on the treasure. "There's the tobacco. I suppose one of you will give me a match?"

All that the three before him could ever afterward recollect—and for several years afterward they cudgelled their brains pretty thoroughly about that moment—was that Whispering Smith took hold of the left lapel of ths coat to take the tobacco out of the breast pocket. An excuse to take that lapel in his left hand was, in fact, all that Whispering Smith needed to put not alone the three men before him but all Oroville at his mercy. The play of his right hand in crossing the corduroy waistcoat to pull his revolver from its scabbard and throw it into their faces was all too quick for better eyes than theirs. They saw only the muzzle of the heavy Colt's playing like a snake' tongue under their surprised noses, with the good-natured smile still behind it. "Or will one of you roll a cigarette?" asked Whispering Smith, without a break between the two questions. "I don't smoke. Now don't make faces; go right ahead. Do anything you want to with your hands. I wouldn't ask a man to keep his hands or feet still on a hot day like this," he insisted, the revolver playing all the time. "You won't draw? You won't fight? Pshaw! Then disengage your hands gently from your guns. You fellows really ought not to attempt to pull a gun in Oroville, and I will tell you why—there's a reason for it." He looked confidential as he put his head forward to whisper among the crestfallen faces.

(Continued Next Week.)

Markets

PHILADELPHIA PRODUCE

Oct. 18, 1920.

Supplies of potatoes are more plentiful, there being on hand here at the present writing around 100 cars principally from Penna. and N. J. Prices are somewhat easier with market ruling about steady at the revised quotations, which are about as follows: Penna., Lehigh Co. stock, $1.65@1.85 cwt., other Penna. sections, $2@2.25 cwt. N. J. Giants, $2.65@2.75 per 150 lb. sk., with round stock around $3 sack. The potatoes hauled in by the nearby farmers are jobbing out mostly at 80@90c per ⅝-bskt. for No. 1 with No. 2s at 30@50c ⅝-bskt. Southern sweet potatoes are also more plentiful and moving more slowly at $2.75@3.25 bbl. The N. J. sweet potatoes are in fair supply and steady demand at 75@90c ⅝-bskt. for prime yellows with prime reds ranging from 80c@$1 ⅝-bskt.; the No. 2 N. J. sweets sell generally at 30@50c per ⅝-bskt.

Vegetables—The supplies of nearby green and wax beans are getting lighter and the prices are gradually advancing. Sales are being made generally at 75c@$1.75 per ⅝-bskt. as to quality. Beets remain about steady at the unchanged price of 2½@3½c bunch, with some extra fancy large beets bringing up to 4c bunch. Brussel sprouts are in light supply and selling around 24@27c qt. The supplies of nearby carrots have become more plentiful during the past few days and the market is ruling easy at 50@70c per ⅝-bskt. Some N. Y. state carrots rough and unwashed sold at $1.75@2 per 100-lb. sack.

Cabbage is plentiful there being some 28 to 30 cars of N. Y. state cababge here which is selling at $10@14 ton for domestic with the Danish up to $17 ton in a slow way. Nearby Penna. and N. J. cabbage is selling at 3@7c head and 30@50c ⅝-bskt. Cauliflower declined today under heavier supplies, that from the L. I. section selling at $2.25@2.50 crate while the Buffalo section cauliflower ranged from $2.25@2.50 crate. Celery is in ample supply for the demand at 20@60c bunch for the N. Y. stock, while the Penna. celery is selling at 10@18c bunch and 3@7c bunch for the hearts.

Corn is in lighter supply and firmer at $1@3.50 per 100 ears as to quality. Cucumbers are a very scarce article, a few from N. Y. sold at $3.50 bush. Eggplants are improving in price when showing good quality and selling around 50@75c per ⅝-bskt. Horseradish is in light supply and wanted at at around $15@20 bbl. Lettuce is in light supply but lots of it is very poor stock. Two cars from N. Y. sold this morning at prices ranging from 50c up to $3.75 box containing about two dozen heads. N. J. lettuce sold at the range of $1@3 box.

Lima beans are in moderate supply and firm, the New Jerseys selling at $2@4.50 hamper as to condition, and the Marylands at $3@4, while the L. Is. sold at $4 bushel sack. Onions are in ample supply for the demand at the low price of $1.35@1.65 per 200-lb. sack for the yellow onions, while a car of white onions sold up to $2.25 per 100-lb. sack. Parsley is plentiful and prices are unchanged at 1@2c bunch, mostly with some extra fancy large bunches from Penna. up to 2½c bunch. Parsnips are increasing in supply and prices gradually declining with the present values being about 50@65c per ⅝-bskt. Peppers are about steady at 20@40c per ⅝-bskt. for the green peppers with the red peppers at 40@60c bskt. and the egg finger or hot peppers ranging from 50@75c per ⅝-bskt.

Pumpkins are meeting a fair demand at 30@50c per ⅝-bskt., with barrel pumpkins ranging from $1@1.50. Radishes show no change from last week's prices of 1½@2½c bunch. Tomatoes are getting scarcer and fancy stock is advancing in price. Best tomatoes are selling around $1.50@2.00 per ⅝-basket, but most stock is only good enough to command 75c@$1 basket with some still very poor which only bring 25@50c bskt. White turnips are in good demand when washed and fancy at 60@80c per ⅝-bskt. while the poor unwashed ones only bring 40@50c bskt. Penna. yellow turnips or rutabagas are in good demand at $1@1.25 per ⅝-bskt. while the yellow Aberdeens range from 65@75c bskt. Spinach is in free supply and selling mostly at 30@50c per ⅝-bskt. with some fancy up to 60c bskt.

Fruits—The market on apples is showing very little change. Fancy high colored red apples and soft apples are in good demand. the ordinary and common apples and hard varieties are slow and draggy at low prices. There were around 30 cars here this morning sales of the various varieties being made around the following range of prices. Twenty Ounce, $3@4.25; Gano, $4@5; Stayman Winesaps, $5@6.25; Snows, $4.50@6; Maiden Blush, $4.50@5; Kings, $5@6.50; McIntosh, $5@6.50; Jonathans, $5@6.50; King David, $4@6.50; Baldwins, $3.25@4.50; Ben Davis, $3@3.75; Pippins, $3@4; Wolf Rivers, $4@4.50; Pink Twigs, $4@5; Grimes Golden, $5@6; Cabashaws, $3; York Imperials, $3@4.50. Bushels various varieties, 75c@$1.25. Box apples, various varieties, $1.90@4.75. Bulk apples per cwt., $1@1.50.

There were three cars of N. Y. peaches here this morning which sold at $1.50@2.75 bbl. Three cars of N. Y. plums sold from $1@2 bushel. N. Y. grapes sold at $1.25@1.50 per 12-qt. bskt., and $3.50@3.90 bu. for the wine grapes, while the small pony baskets or eating grapes ranged from 25@80c bskt. Cranberries are selling slowly at $2.50@3.25 crate. Pears are in ample supply for the demand with Bartletts ranging all the way from $1@2.50 bushel. Seckels $2@3.25 bu. and other varieties $1@2.25 bu. Quinces are in light supply and selling at $5@9 bbl. and $2@3 bushel.

Poultry—There has been a big drop in prices on live fowls and chickens during the past week and values are very much lower than the prices prevailing in our last week's market reports. At this writing fancy heavy fowls are selling at [illegible] lb. with light to medium weight fowls at 22@[illegible] and the leghorn fowls at 19[illegible]. [illegible] chickens are selling at [illegible] lb. with the common to good at 24@26c and the leghorn chickens at 23@24c. Ducks are in light supply and firm at 30@34c lb. Some geese are now on the market and selling around 30c lb.

Eggs.—Strictly fine eggs are strong and active with supplies being cleaned up promptly upon arrival at about the following prices. Nearby current receipts, 66c; nearby firsts, 67@68c, ordinary to fair nearby eggs, 59@63c, and fancy carefully graded and selected are jobbing out at 78@79c doz. Western eggs are quotable at 63@65c doz. on the firsts with the extra firsts 66@68c doz., and seconds at 52@57c.

LANCASTER PRODUCE

—Oct. 16, 1920.

Eighty-cent eggs went begging this morning when many of the farmers unloaded large quantities at 72 and 75 cents. Despite the direct delivery by farmers of hundreds of bushels of potatoes to city homes during the past week there was a heavy sale of potatoes at $1.00 and $1.15 per bushel with seconds selling at 75 cents and considered an excellent buy. The market was well attended by farmers. The quotations:

Butter and Eggs—Fresh eggs, 72@75c doz.; country butter, 70@75c lb.; creamery butter, 80c lb.; duck eggs, 70@80c doz.; geese eggs, 7@8c each.

Poultry—Dressed fowls, $2@2.25 each; broilers, $1@2 each; squabs, 50c@$1 each.

Vegetables—Parsnips, box, 10c; spinach, 15@20c per ½-pk.; turnips, 40c per ½-pk.; peppers, 2@3c ea.; cucumbers, 5c ea.; potatoes, 20c per ½-pk.; $1@1.15 bushel; sweet potatoes, 30@40c per ½-pk.; cabbage, 5@10c head; cauliflower, 15@25c head; lima beans, 25@30c pint; onions, 10c box; red beets, 5c bunch; beans, 30@40c ½-pk.; rhubarb, 3@5c bunch; tomatoes, 20c ½-pk.; corn, 15@25c doz.

Fruit—Peaches, $1.75@2.25 bskt.; 10@25c qt. box; apples, 15@25c ½-pk.; cantaloupes, 5@10c ea.; watermelons, 25@60c ea.; pears, 20@30c ½-pk.

YORK PRODUCE

—Oct. 16, 1920.

Little business is done in potatoes with the exception of those trucked in from the lower end of the county. Consumers claim they should have the tubers for $1.00 while the local growers have but a limited supply and are holding for their winter retail trade which they claim will bring them around $1.50 and $2.00. Hence we have the peculiar condition of a crop that is priced low, yet buyers unable to get the quantity desired. The apple situation has changed but little. Prices range around 50c for common stock, ungraded, to $1.00 and $1.50 delivered for second and first-class graded stocks respectively.

Eggs—70@75c dozen.

Butter—County, 65@70c lb.; separator, 75c lb.; milk, 14c qt.

Poultry—Hens, 26@28c lb.; springers, 35c lb.; dressed, $1.00@2.25 each.

Vegetables—Potatoes, 10@24c ½-pk.; $1@1.40 bu.; lettuce, 5c hd.; cabbage, 5@10c hd.; dull: radishes, 5c bch.; beets, 5c box; onions, 5c bch.; 15@20c ½-pk.; corn, 20@40c doz.; peppers, 15@20c doz.; lima beans, 40c qt.; soup beans, 25c qt.; eggplants, 4@10c ea.; squash, 3@5c ea.; ham, sliced, 45@80c lb.; whole, 40@45c lb.; lard, 25@28c lb.

Fruit—Apples, 10@40c ½-pk.; box, 12@18c; 50c@$1.50 bu.; pears, 15@25c ½-pk.; peaches, 25@35c ¼-pk.; tomatoes, 15@20c ¼-pk.

Retail Grain Market—Wheat, $2.25; corn, $1.75; oats, $1.00; rye, $1.50; bran, $3.00 per cwt.; middlings, $3.75 per cwt.

Wholesale Grain Market—Wheat, $1.90; corn, $1.00; oats, 50c; rye, $1.00.

PITTSBURGH PRODUCE

—Oct. 16, 1920.

Butter and Cheese—Prints, 61½@62c; tubs, 61@61½c; cooking, 53@54c; Ohio, 57@58c.

Cheese—New York full creams, 32@33c; Wis. Swiss, 49@50c; do 1-lb. brick, 31@32c; Swiss 5-lb. block, 33@34c; Phila. cream, doz., $1.00.

Eggs—Fresh select, 68@70c; current receipts, 63@64c; candled, 56@58c; do at mark, 53@54c.

Vegetables—Potatoes, bulk, per 100 lbs., $2.25@2.50; sweet, East Shore, bbl., $4@4.50; beans, wax and green, hamper, $1.75@2.00; do, lima, hamper, $5; onions, Spanish, crate, $2@2.25; do h. g. 100-lb. sack, $1.90@2; cabbage, h. g. bushel, 85c@$1.00; do bbl., $2@2.50; green corn, h. g., bushel, $2@2.50; cauliflower, crate, $2.50@3; lettuce, h. g., bskt., 50c; do head, box, $2@2.50; turnips, bu., $1.50@2; parsley, doz., 35@40c; tomatoes, h. g. bskt., $1.50@1.75; eggplant, h. g. bskt., $1; cucumbers, home grown, bu., $3.50@4; do pickles, per 100 75@90c; carrots, bu., $1.25@1.75; celery, bunch, 25@75c; peppers, hamper, 75c@$1; do red, bu., $1.25@2.

Fruit—Apples, bu., $1@2.25; do bbl., $3.50@5; do crab, bu., $2@2.50; pears, Bartlett, N. Y., bu., $3@3.50; do Seckel, bu., $3.25@3.75; do Kiefer, $1.50.

BALTIMORE PRODUCE

—Oct. 16, 1920.

Butter—Creamery, Western separator, extras, 61@62c; do firsts, 60@61c; Western prints, ½ lb., extras, 62@63c; do, firsts, 60@61c; nearby creamery, extras, 53@54c; do firsts, 51@52c; dairy prints, Md., Penna and Va., extras, 35@36c; do, 34@35c; store-packed, firsts, 35c.

Eggs—Western Md., Penna. and nearby, firsts, 63c; Eastern Shore, Md. and Va., 1sts, 63c; Western (Ohio), firsts, 62@63c; W. Va. firsts, 60@61c.

Live Poultry—Chickens, young, large, 32c; do, young, small, poor, 30c; do, old roosters, 21@22c; do old hens, over 4 lbs., 33c; do small 28@30c; do, white Leghorns 1½ lbs., 30c. Ducks, Muscovy and mongrel, young, [illegible]; do, white Pekins, young 32c; do [illegible] do, smaller, poor, 25@26c. Turkeys, choice, heavy, 45@50c. Pigeons, old, pair, 35@40c; do, young, pair, 35@40c. Guinea fowl, 1 to 1¼ lbs. each, 60@70c.

NEW YORK PRODUCE

—Oct. 16, 1920.

Butter—Barely steady; receipts, 6143 tubs; creamery higher than extra, 60@60½c; extra (92 score), 59@59½c; first (88 to 91 score), 48@58c; packing stock, current make, No. 1, 36c.

Eggs irregular; receipts, 13,304 cases; fresh-gathered extra first, 67@69c; do first, 63@66c; state, Penna. and nearby western hennery white, first to extra, 88c@$1.08; do, brown extra, 75@84c; do gathered brown and mixed colors, first to extra, 63@71c.

Cheese unsettled; receipts, 752 boxes; state, whole milk flats, held, specials, 27½@28½c; do average run, 27c; do, whole milk, flats, current make, specials, 26½@27½c; do average run, 25@26c; do, whole milk, twins, held specials, 27½@28c; do average run, 27c.

Poultry—Live, not quoted; dressed, easy; western broilers, fresh, 38@48c; others unchanged.

Vegetables—Potatoes, bbl., state 180 lbs., $4@4.50; L. I. bbl., $4.25@4.75; Jy. round, 100 lbs., $3@4.25; Jy., long, 165-lb., $3@3.25; No. 2, $1.50@2; sweets, Jy., 1s bskt., $1@1.50; Md., bskt., 75c@$1.25. Brussels sprouts, qt., 5@20c; beans, bskt., wax, $1@4.50; green, $1@4.50; Italian, $1@3.50; beets, nearby, bbl., $2@2.50; carrots, nearby, 100, $2@3; corn, Jy., 100, $2@4; celery, crate, state, bunch 15@65c; Jy., bunch, 15@65c; cucumbers, state bskt., $1@4; nby. bskt., $1.50@3; cauliflower, nby., crate, 85c@$2.25; eggplants, box, 50c@$1; lima beasn, Jy., bskt., $2@5; L. I., bskt., $2@5; lettuce, state, bskt., $1@3; nearby, crate, $1@3.50; okra, Jy., crate, $1.50@2.50; onions, bag, $1.25@2; peppers, green, bbl., $2; pumpkins, cheese, $1@1.25; Yankee, 50@75c; parsnips, bbl. or bag, $3@4; radishes, nearby, 100 bchs, $1@1.50; spinach, nearby, bskt., 50c@$1; turnips, white, 100 bchs., $2@4; bskt., 75c@$1.25; rutabaga, bbl., $1@1.75; bag, $1@1.50; can, bag, $1.50@1.75; tomatoes, nby., bush., box or bskt., $1@3.

Fresh Fruits—Apples, bskts., fancy, $1.25@2; average, 65c@$1; bbls., York Imp., $3.75@4.50; Baldwin, $3@4; Jonathan, $4.50@6.50; Delicious, $5@6.50; winter B., $6@7; Alexander, $3@5.50; 20-Ounce, $3@5.50; Wolf River, $3@5.50; Wealthy, $3@6; Greening, $3@5; McIntosh, $4.50@7; King, $4.50@5.50; western boxes, King David, $2@3.75; Jonathan, $3@3.75; Delicious, $3.75@4.75; crabapples, bbl., $5@9; bush. bskt., $2@3; pears, bskts., $1.50@3; bbls., $3@10; cranberries, C. Cod, E. bulk, bbl., $9@9.50; do poor, $5.50@7; do ½-bbl., $3.75@4.75; do N. Y., crate, $2.50@2.75; plums, bu. bskt., $1.50@2.25. Grapes, state, Del. crate, $1.50@1.75; Cord., bskt., $1.35@1.45; cond., crate, $1.50@1.65; Niagara, bskt., $1@1.25.

PHILADELPHIA HAY AND GRAIN

—Oct. 19, 1920.

Baled Hay and Straw—Receipts, 96 tons of hay. Quiet but firm under small supplies. Timothy hay, No. 2, $32@32.50; No. 3, $28@29; sample, $23@$25; no grade, $18@21; clover-mixed hay, light mixed, $30.50@31; No. 1 mixed, $28@29; straw, No. 1 straight rye, $20.50@21; No. 2 do, $19@19.50; No. 1 tangled rye, $17@18; No. 2 do, $16.50@17; No. 1 wheat straw, $16.50@17; No. 2 do, $16.

Bran—Sold slowly and prices favored buyers. We quote car lots, including sacks: Soft winter bran, western, in 100-lb. sacks, per ton, $42@43; spring bran, in 100-lb. sacks, per ton, $41@42.

Corn—No. 1 yellow $1.15@1.18.

Wheat—New: No. 2 red winter, $2.37@2.42. No. 2 red winter, garlicky, $2.22@2.27.

Oats—No. 2 white, 67@67½c; No. 3 white, 66@66½c.

PITTSBURGH HAY AND GRAIN

—Oct. 16, 1920.

Receipts of hay have fallen off considerably during the week. Arrivals are bringing quotations. Altho there is not much enthusiasm, there is a better feeling. Straw receipts are fully equal to demand. Wheat straw seeming to have the call. There is a scarcity of this quality while there seems to be plenty of oat straw. Demand for ear corn, shelled corn and oats quiet and about equal to receipts. Market slow. The following prices can be realized: No. 1 timothy, $32.50@33.00; Standard timothy, $30@30.50; No. 2 timothy, $28.50@29.50; No. 3 timothy, $24@25; No. 1 light clover mixed, $29@30; No. 1 clover mixed, $30@31; No. 1 oat straw, $17@17.50; No. 2 oat straw, $16.50@17; No. 1 wheat straw $16.50@17; No. 2 wheat straw, $16@16.50; No. 1 rye straw, $17@17.50; No. 2 rye straw, $16.50@17.00; new No. 2 white oats 62½@63c; new No. 3 white oats 59@60c; No. 2 yellow ear corn, $1.20@1.23; No. 2 yellow shelled corn, $1.11@1.12.

NEW YORK HAY AND GRAIN

—Oct. 16, 1920.

Feed—The market for mill feed was weak on account of lack of demand and efforts on the part of mills to make sales here by reducing their figures.

Quotations: City feed bran, $40; middling, $46, in 100-lb. sacks; red dog, $78 nominal, in 100-lb. sacks; Western spring bran, $38; standard middling, $40; flour middling, $51; red dog, $65; all in 100-lb. sacks, 30 day shipment. Oat feed, $22; rye middlings, $39; white hominy feed, $45 all in 100-lb. sacks. Cottonseed oil meal $51.50; linseed oil meal, $57, in 100-lb. sacks.

Hay and Straw—Offerings are still liberal at most harbor points but the amount of hay in transit shows some reduction due to embargo on all roads, and the feeling is generally steady, especially on top qualities, with some holders inclined to ask more money. Straw holding about steady.

Hay—Large bales, timothy, No. 1, $38@39; No. 2, $35@37; No. 3, $[illegible]; shipping, $27@30; no grade, 1[illegible]; clover mixed, fancy, $35@37; No. 1, 32@34; No. 2, $26@29; straw, large bales, No. 1 rye, $26; No. 1 oat, $19@20.

Wheat—No. 2 red, c. i. f., $2.43; No. 2, hard, $2.43.

Corn—No. 2 yellow, $1.77¾; No. 2 white $1.16¼; No. 3 white, $1.15¾.

Oats—No. 1 white, 67@67½c; white, do, No. 3 white, 66@66½c.

Rye—C. i. f., $1.94⅝. **Barley**, feeding, $1.05@1.06.

LIVESTOCK MARKETS

LANCASTER

Cattle—Receipts, 3267 head; market active; under liberal receipts butcher cattle declined 50c; fat bulls, cows and heifers being steady; good to choice steers, $12.50@13.50; fair to good, $11.50@12.50; medium, $10.50@11.50; common, $8.50@10.50; fair to good bulls, $9@13.50; medium, $7.50@9; common, $6@7.50;; choice to prime heifers, $11.50@12.50; good to choice, $10.50@11.50; medium, $9@10.50; common, $5.50@9; good to choice cows; $8.50@10; medium, $7@8.50; common, $5.75@7; canners and cutters, $4@5.75; good to choice feeding steers, $10.75@12; fair to good, $9@10.75; common, $5.50@7.50; good to choice stock bulls, $8.25@9.50; fair to good, $7@8.25; common, $5@7; good to choice, stock heifers, $8.50@9.50; fair to good, $6.50@8.50; common, $5@6.50.

PHILADELPHIA DAIRY MARKET

—Oct. 16, 1920.

Butter—Receipts, 1219 tubs. The market was dull as usual on the last day of the week and unchanged. We quote: Fresh, solid-packed creamery, high-scoring goods, 61@63c, the latter for jobbing sales; extra, 60c; do, extra firsts 58c; firsts, 48@53c; seconds, 43@47c; sweet creamery choice to fancy, 62@64c; fair to good, 51@61c; ladle packed, as to quality, 40@42c; packing stock, 34@37c; fancy brands of nearby prints were jobbing at 68@71c; good to choice, 60@67c; fair, 57@59c.

Cheese quiet and barely steady. We quote: New York, whole milk, current make fancy flats, 28@28½c; common to fair, 24@27c; Longhorns, 28@28½c; single daisies, 27¾@28½c; jobbing sales of fancy goods, 31@32c.

NEW YORK MILK MARKET

—Oct. 18, 1920.

Altho arrivals this week show a decrease, supply is still more than abundant and demand slow. The surplus is heavy and being manufactured into cheese. The rate for October in 200-mile zone is $3.65 per 100 lbs. for 3 per cent milk, add 4c per 100 lbs. for each aditional one-tenth of one per cent butterfat.

Receipts of milk and cream in 40 qt. cans for the week ending Oct. 16, 1920, were as follows:

Railroad.	Milk.	Cream.
Erie	39,704	2,008
Susquehanna	11,589	100
West Shore	15,462	1,910
Lackawanna	59,223	2,615
New York Central (long haul)	188,441	3,462
Ontario	46,110	1,924
Lehigh Valley	53,737	765
New Haven	6,800	75
Pennsylvania	11,986	477
Other sources	6,500	300
Totals	439,552	13,630
Same week last year	391,139	15,011

TOBACCO MARKET

—Oct. 18, 1920.

The United States Department of Agriculture proposes to take a hand in tobacco market matters and to establish bonded warehouses where tobacco may be held until a market is found.

Operating thru the bureau of markets and under the warehousing act a study of conditions including storage, financing, marketing, etc., has been made and special attention has been given to the problems of farmers, dealers, manufacturers, bankers and insurance and bonding companies in their respective relation to proposed storage warehouses. To cover the situation a comprehensive code of regulations has been prepared and issued in tentative form and all concerned invited to attend various hearings, the outcome of which it is hoped will be an arrangement satisfactory to all parties.

Participation in these bonded warehouses will be entirely voluntary both with references to those who establish and patronize the same. Those proposing to enter the warehouse business must give assurance that they are competent and that warehouses to be used is suitable for proper storage of tobacco. The fundamental purpose of the plan is to obtain by licensing, under bond and government supervision and inspection a system of warehouses in which tobacco may be safely stored and thru which the industry can be more easily financed and tobacco more advantageously marketed.

Ownership of tobacco thus warehoused would be evidenced by warehouse [illegible] of a thoroly descriptive nature [illegible] thought, would come to the buyer [illegible] data as to condition, quality, etc. [illegible] a receipt would be transferable and [illegible] tiable and could also be deposited as [illegible] eral for loans. It would seem [illegible] ed plan should result in much [illegible] growers, especially if used in conj[illegible] with organization of same.

INTERSTATE MILK PRICES

—Oct. 1[illegible]

Prices for milk delivered to Phil[illegible] by the farmer in effect for October [illegible] follows: Three per cent milk, $4.2[illegible] or basic quantity price per quart [illegible] 3.5 per cent milk, $4.40 per cwt. or [illegible] quantity price 9.6c per quart; for [illegible] cent milk, $4.60 per cwt., basic [illegible] price of 10c per qt. The price for [illegible] milk 3 per cent, $2.41 cwt.; 3.5 per cent, $2.61 cwt.; 4.0 per cent, $2.81 cwt. at receiving stations. When milk is not tested the price f. o. b. Philadelphia is [illegible] ⅞c per quart.

Farm Products Prices and Prospects

A Review of the Feed Market

By Sanders Sosland

The price structure on feedstuffs markets of the United States has been changed radically. Instead of two-dollar corn and dollar oats, the prices on terminals today average around a dollar for corn and fifty cents for oats. Sixty-dollar bran in the West and $70-bran in the East have been replaced by market prices less than half the record level of a few months ago. Wheat shorts, cottonseed cake and meal, alfalfa hay and mixed feeds have declined in proportion. The downward revision of values on feeds has been as sharp as in other products, including wheat, cotton, wool, lumber and steel.

As reflected by the demand situation, prospective buyers are almost generally of the opinion that values have not yet reached their low point. Consumers are holding off, buying only what they actually require for immediate needs. Even the retail feed merchant is buying sparingly, though he is usually accumulating stocks at this season for the enlarged late autumn, winter and spring demand for his local trade. Even the manufacturer of commercial mixed feeds, an important force in the market, is buying with ultra-conservatism. But the fact that the trade is not buying cannot or at least should not now be construed as an indication that further price recessions will be witnessed. It is human nature to halt buying on a declining market and to buy heavily when prices are rising. Buyers of feedstuffs have profited by delaying their purchases thus far, but the question is yet to be answered whether further postponement of buying will prove profitable.

Bran is one of the feeds used on a large scale by the East which shows evidence of having approached or already reached its low point on the present movement. Of course, there are numerous operators in the West and Central States who anticipate a further recession in prices to around $20 a ton, but majority sentiment of the trade disagrees with this view. A significant influence in the market for bran is the fact that very little if any of the offal is going into storage at this time for sale later in the crop year. Under normal conditions, large speculative jobbers and other handlers buy thousands of tons of bran and shorts during the early fall, which is almost invariably a period of light consumption, place the feed in storage, and then offer it for sale in the winter and spring months when mill production is light and the demand is heavy. From what source will the feed be obtained this year, in view of the absence of storage stocks and the prospects for continued light activity of milling plants? This question is causing the trade to display a friendlier feeling toward the future market. The argument is advanced by bearish operators that demand at no time on the crop will be up to normal proportions, owing to the enormous feed supplies of various classes in the country, and that, therefore, the market will not feel the effect of the absence of storage stocks. An extended period of cold weather, however, would alter this view considerably.

On the Minneapolis market bran is selling around $28 to $29 a ton, sacked, for carlots, with Kansas City, another of the important producing points, around $28, and $31 in St. Louis. The offal is available at about the same price for November-December shipment, Chicago reporting some sales around $31 a ton for later delivery. As anticipated, the margin of about $20 a ton between bran and gray shorts has widened to less than $5 a ton. Gray shorts or flour middlings are bringing a comparatively higher price in the spring wheat territory than in other sections, maintaining a premium over bran in Minneapolis of about $10. Kansas City quotes gray shorts with the same feeding analysis as bran around $32 a ton for prompt or deferred shipment, and St. Louis, usually at a premium over the leading spring wheat market, is offering freely around $36 a ton. There is only a very small differential between bran and brown shorts, the latter product being practically unsalable. The enormous crop of corn and comparatively low price of the coarse grain tend to depress the wheat shorts.

Dairymen of the East, and this is also true of consumers in other sections of the country, have reduced sharply their purchases of alfalfa hay in the West. Marketings from producing sections have been maintained at a liberal volume, however, with the result that prices have undergone further sharp depression. Alfalfa in Kansas City, the largest forage market in the country, is selling considerably under cost of production, and this is naturally restricting further shipments. Dealers are urging their trade strongly against consigning or shipping hay to market, owing to the extremely light demand. In not a few instances, country operators or growers have been forced to dig into their pockets to meet expenses on their shipments, as the sale price on markets was insufficient to cover. The best grades of alfalfa are selling around a top of $25 a ton, with the cheapest offerings down to $12 a ton. Good dairy feeding hay can be bought between $20 and $23 a ton at this writing, the market being off about $5 to $6 a ton compared with a month ago. While there is little prospect of any sharp upturn in the prices of alfalfa hay, still it seems improbable that the market can undergo further sharp revision downward. Colder weather and lessened use of pasturage will be felt in a broader demand within another month and hay prices will develop greater strength. Tame and prairie hay have declined as rapidly as alfalfa. The sharp reduction in the purchasing power of the South resulting from the radical declines in cotton is an important bearish influence in the alfalfa and timothy trade and is doing more to forces values down than any other factor, except possibly the enormous stocks of other feeds available in the country. Not on this crop will the two-cents-a-pound prices for hay again be witnessed.

Though the depression has been slow, the low point of prices has not yet been reached in the market for cottonseed cake and meal. Feeders continue to buy very sparingly, the aggregate purchases of cake and meal by cattle handlers being of an insignificant volume, the smallest in many years for the summer and fall seasons. For a time within the past month the belief was expressed that foreigners would step in and buy in sufficient quantities to sustain our market, but this failed to develop. Some sales were made to exporters, but European buyers are unwilling to pay the prices asked on American markets, particularly in the face of the abnormal relationship of exchange. It is very improbable, too, that Europe will provide the broad outlet for cake and meal which the trade enjoyed prior to the opening of the world war. The needs for feed abroad are not so acute as during the war period; in fact, some feedstuffs are now being imported from Europe for domestic consumption, this including sugar beet pulp and distillers' and brewers' by-products grains. Cottonseed cake and meal of 43 per cent protein content is bringing around $42 a ton, basis Texas, with the Southeast on practically the same basis. The market is off about $5 a ton compared with a month ago. Fertilizer manufacturers, recognizing their position as buyers, are holding off, and this is also true of mixed feed manufacturers. The time for accumulating needs of cake and meal is not yet at hand.

Restricted production by linseed oil mills has held up the price of linseed cake and meal, but the flaxseed product is out of line with cottonseed feed and should undergo a readjustment. Linseed feed is one of the few commodities which have maintained a comparatively steady tone. Cake and meal is bringing around $60 to $62 a ton, basis Minneapolis, for spot or November shipment, with the export market in the East, which is quiet, around $57 to $58 a ton. Feeders are buying very sparingly, manifesting surprise at the ability of the product to maintain its price in face of the sharp depression in other feeds.

With a corn crop of 3,216,000,000 bushels, the largest in the history of the United States, enormous stocks of other feeds on farms, fewer hogs to be fed and a lower price for the pork animals on markets, a return of near pre-war levels in the coarse grain has not been unexpected. Cash corn can be bought on markets of the Middle West below a dollar a bushel, and the December and May deliveries in the future trade are below 90 cents a bushel at this writing. Corn is below a parity with hogs, but demand for the grain on markets has not been stimulated on this account. Oats also have shared along with corn in the general price depression, selling between 50 and 60 cents a bushel in the Middle West. Maturity of corn under almost ideal conditions is stimulating bearish sentiment as to the price outlook. But corn and oats already are more than 50 per cent lower than at the high point in the early summer months, and cannot, therefore, be expected to continue the downward trend for an indefinite period.

I am not extremely bearish on grain and feed on the basis of the present level of prices. Markets have been influenced to a considerable extent by the sentiment of declining values for all commodities, and trade operators have been stimulated in their pressure on prices by the belief that all industry is undergoing a period of deflation instead of one of inflation, as has been the case in the past few years. Prospective buyers of feed, however, must not overlook the fact that the approach of colder weather means abandonment of many pastures and a broadening consumptive demand on markets. This may bring a rally in prices, however slight, altho there is even the possibility that the enormous stocks of feed in the country will be sufficient to meet needs of the trade without forcing values up.

MEN LEAVING THE FARMS IN OHIO

The drift of population from the farms to the cities has recently been progress in rapidly in Ohio, according to a survey just completed by W. F. Callander, of the U. S. Bureau of Crop Estimates and the Ohio Bureau of Agricultureal Statistics. This survey, which is based on records of from 100 to 300 farms in each county, shows that in June this year there were 70,000 men and boys over 15 years of age who were working for wages on the farms of Ohio. The previous year 100,000 men and boys were so employed. This is a decrease of 30,000 men, or 30 per cent, a most surprising change for one year. New York State farmers were much disturbed by the shortage of farm labor last spring, but the decrease here was only about 15 per cent.

The Ohio figures also show that, exclusive of hired men, there were 340,000 men and boys on the farms in June, and 370,000 at the same time last year. This is a decrease of 30,000, or 8 per cent. During the same period the number of vacant habitale houses on farms increased from 18,000 to 29,000, an increase of 61 per cent.

These figures are worth careful study, for they show how quickly men flock to the cities when industrial wages are high.

FINE CROPS IN NEW YORK

For the third month in succession the weather has favored New York state farmers and all growing crops except potatoes will produce more abundantly than was expected a month ago. The yield per acre of all crops combined will be nearly nine per cent above the average during the last ten years. The hot weather of September, with days when the temperature ran up close to 90 degrees even in the northern counties, ripened late corn and buckwheat in fine shape. There was frost in some of the colder sections on September 20th, but most localities escaped until the frosts of October 6th or 7th which affected fully three-fourths of the state.

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THE First Book of Its Kind by the Country's Foremost Authority on Milk—Just From the Press—Contains Facts and Figures Never Before Gathered—Presented in a Clear-Cut, Scholarly Style—Touches Upon All the Factors Affecting the Dairy Business and Shows what Caused Low Prices and Also Tells How to Maintain Profitable Prices.

Dr. King's work for the State and National Government during the War gave him an exceptional opportunity to go farther into the economics of the Milk Market question than any man ever had before and his previous training as an Economist Enabled him to gather facts and make recommendations which are Fundamental in the business. The book is well illustrated by tables, graphs and figures which make it easily understood and interesting.

Every Dairyman Should Read This Book If He Would Understand His Own Business

Good Farmers realize that they must know the business side of farming to succeed. It is no longer enough that a Farmer be a good producer. He must also be a good market man. To be that he must know marketing laws and conditions. The book will inform him on that subject.

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The following table of contents will give a suggestion as to what it contains. Every chapter is important and presents the subject clearly and forcibly.

Introductory—Chapter 1. The Public Interest in the Price of Milk. **Part 1. The Price to the Producer**—Chapter 2. The Forces That Fix the Price of Milk. 3. Manufactured Milk Products and the Price of Milk. 4. The Price Interdependence of Local Primary and International Markets. 5. The Cost of Production. 6. Shall Dairymen Organize for Collective Bargaining. 7. Policies of Dairymen's Organizations in Relation to Price. **Part 2. The Cost of Milk Production.** 8. The Cost of Milk Distribution. 9. Sanitary Requirements in Their Relation to Price. 10. How Shall Milk be Distributed? 11. Can Milk Distribution Costs be Lowered? 12. The Public Interest in Milk Distribution. **Part 3. Fair Price Policies.** 13. The Food Value of Wholesome Milk. 14. Co-operation and Price. 15. Fair Price Policies.

The book contains 336 pages with 60 Charts. Maps and diagrams. Size 5 1-2x7 3-4 inches, richly bound in cloth with title in gold.

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Neighborly Talks, No. 12

THE FAULT-FINDING NEIGHBOR

You have probably not longed for his coming, but he is here, what will you do with him?

In the first place, greet him smilingly for nothing takes the kinks out of a professional fault-finder like a smile and a friendly greeting. Occasionally he forgets his regular role and smiles in return. The fault-finder who smiles is lost; he will soon be a deserter from the ranks and join the great army of confirmed optimists.

If he finds fault with you, just be calm and think it over. Possibly he is right; if so, join in with him and find fault with yourself. When a man finds fault with you and you agree with him, words usually fail him for all the wind is taken out of his sails. We often get the best of people by doing the totally unexpected thing.

Then, always be kindly toward the fault-finding neighbor, and don't ever show sensitiveness about what he says. If some other neighbor says "Neighbor Jones is finding fault with you." Just smile, and say "This is a free country, let him enjoy himself." Then, after a time, the fault-finder will grow weary, so weary of himself that perchance he will join the ranks of those who look with eager eyes for the virtues of their fellow-men; who pat some weary mortal on the back and say: "Go to it, John, you can make the goal!" Yes, join the ranks of those who heave with willing shoulder on some brother's burden.

I was once introduced to the champion fault-finder of my county. If he could have found dollars as easily as he found fault he would have been a second Rockefeller. If that man ever gets to Heaven he will find fault with the angels. The only person free from his fault-finding was himself—he always began on the wrong man. He was yet a young man but his face was old and there were wrinkles not only on his face but in his soul. No man can continually look for the worst in his fellow-men and keep his soul unmarred.

Let us be patient with the fault-finding neighbor ,for the day of miracles is not yet past and the Lord may yet give him a face of sunshine and a heart of cheer. Then we will be glad and rejoice with him, and his eyes will be opened to the greatness of his neighbor's virtues, and he will sing songs of praise instead of his gloomy, fault-finding notes.

THE FARMER

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Who thru the dragging days of toil,
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Who rises in the dawn's half light,
Gray morns emerging from the night,
Posned for the ancient manly fight;
Whose stalwart silent figure stands,
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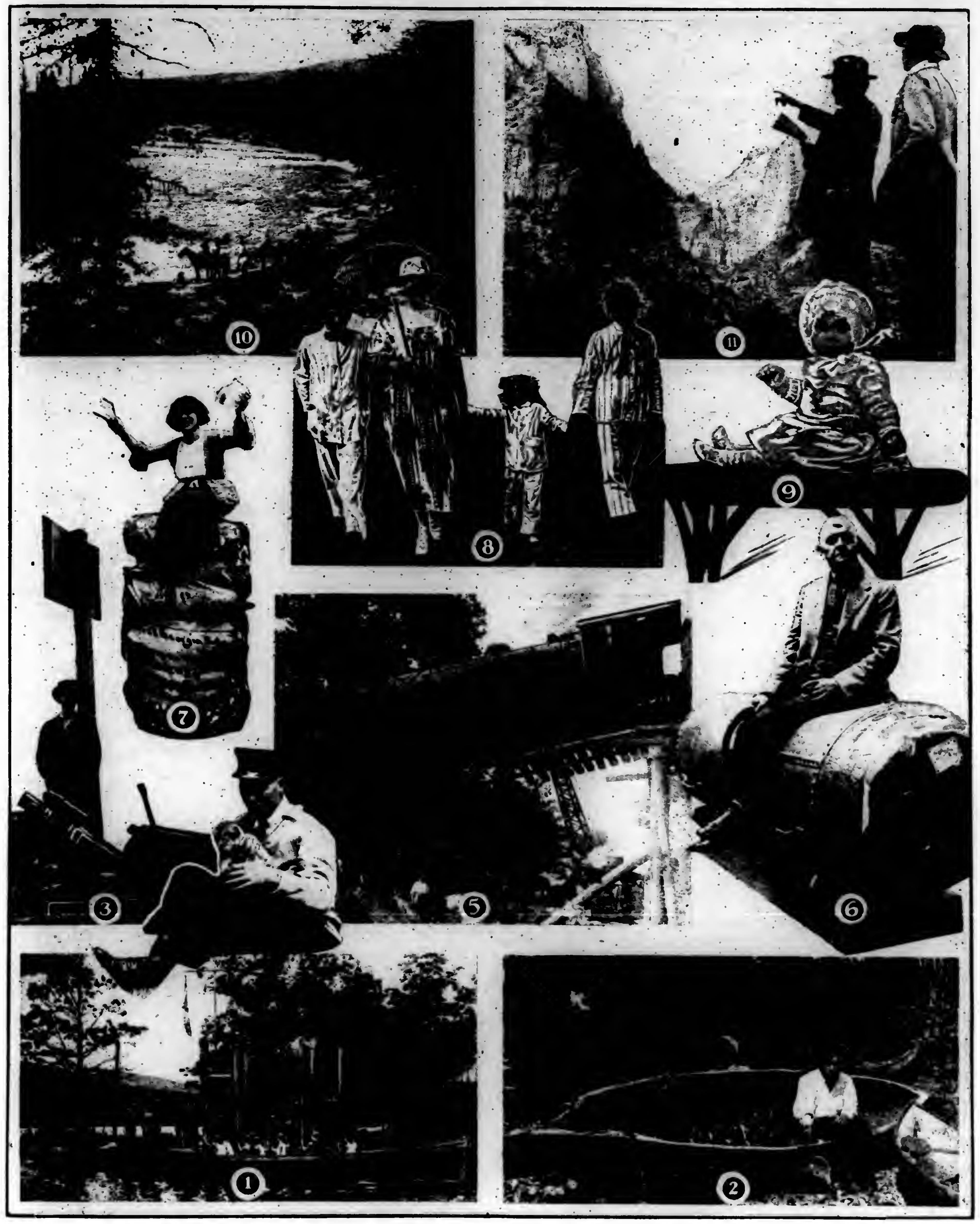

(Photo, Copyright by Underwood & Underwood.)

1—Training Sea Scouts at "Sea Scout Island," at Kanohwahke Lake, N. Y.

2—Indian Hewing a Canoe out of a cedar log.

3—Tourists visit the ruins and relics of the Battlefields of France.

4—A new Baby Lion at Central Park Zoo.

5—Engine suspended over broken bridge at Greencastle, Indiana.

6—Bobby Leach says he will dare Niagara Falls in his steel barrel again.

7—Auctioning the first bale of Georgia cotton in New York.

8—Ostend, Belgium, adopts pajamas for the Boardwalk.

9—Little Ann Cox ready for the camera man.

10—Cowboys looking for a ford at Longview, Alberta, Canada.

11—"The Count of the Patriarchs" in Zion Canyon, Utah, our newest National Park.

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Also use it about the home, in the sick room, sink and cesspools, to establish better health conditions.

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Thanksgiving Day, Thursday, Nov. 25, 1920. [illegible] Registered Durocs [illegible] head [illegible] of tried sows [illegible] and boars, fall pigs of good type and [illegible] Get a Catalog.
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A choice lot of [illegible] boars and gilts on hand. Also some small pigs. Bloodlines of Petroleum Giant, Combination Defender, Schoolmaster, Build Weddle, etc. Exceptional quality. Reasonable prices.
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LIVE STOCK

ENFORCE THE DOG LAW

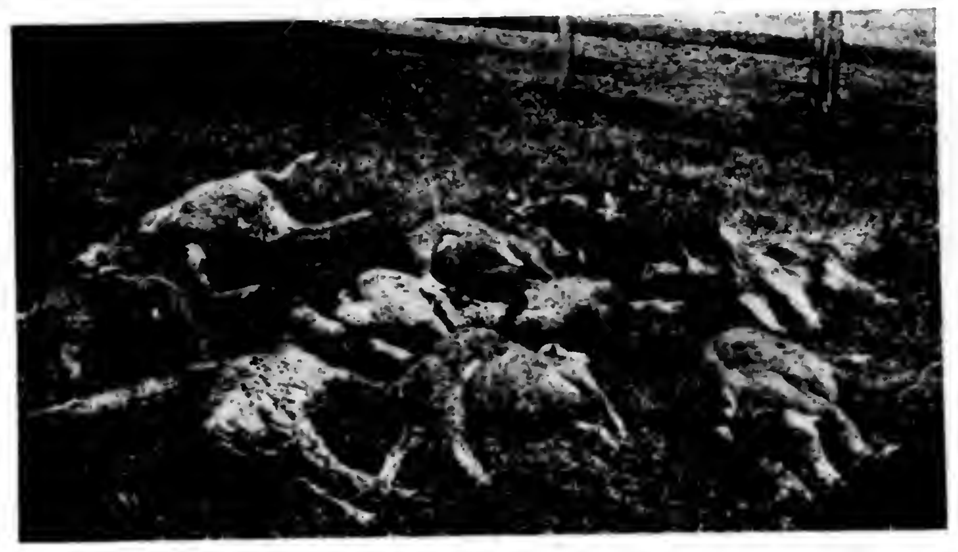
Secretary of Agriculture, Frederick Rasmussen, is making a successful effort to have Pennsylvania's dog law enforced. In addressing the State County Commissioners' Association recently he said:

"After 111 years of failure, the State of Pennsylvania has a dog law on its statute books that can be enforced. The only thing now needed, is to impress upon the dog-owners of Pennsylvania, that the dog law is not a dead letter, and that it will be actively enforced without fear or favor, and that within a short time, the licensing of a dog would be regarded in the same light as the licensing of an automobile.

"The law is not only for the protection of the sheep industry, but for the protection of the poultry industry. It involves the question as to whether the dog clan of the community should have an unchallenged privilege to use your flower beds and newly planted vegetable gardens as a playground; it involves the question of wild life, of birds and game in our fields and forests; it involves the question as to whether your children can pass on the street and play in safety; in fact, the fundamental question of the Dog Law is not based upon any claims of offenses which may be perpetuated by dogs running at large, but upon the broad principle of the protection of life and property to the individual as a member of the community.

"The two years the dog law has been in operation, the sheep growing industry has been increased by 60,308 heads, while during that time 147,053 dogs were killed by constables, peace officers and game protectors. It is not the intention of the law or the object of the Department of Agriculture, to make the dog pay the penalty for his owner's negligence with his life.

"Whenever a dog is found running at large, in violation of the law, or without a license, it is the duty of the officers of the law to kill the dog, but the law also provides very stringent penalties for owning and harboring an unlicensed dog, and it is inhumane to kill the dog and let the master escape."



What Two Dogs Did One Night to a Washington Co., Pa., Flock; Also, the Result to the Dogs

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One reason why the country's in such a ferment is the amount of home brew that's going on.

FATTENING PIGS FOR MARKET

By W. H. Tomhave

We have previously discussed the value and importance of "hogging down corn" for fattening the fall crop of market hogs. It is not possible for every one to fatten hogs by this method. Many will have to be finished in the dry lot. The chief grain for fattening hogs is corn, because it has the fattening qualities and as a rule hogs prefer it to other grains. The common and almost universal practice is to feed it on the car. This is especially true during the fall months before the corn can be easily shelled. There is no special advantage in feeding it in any other form except when the corn becomes hard and dry. When the corn is hard, it may not only be desirable to shell the corn but unless there is too much labor involved, it will pay to grind the corn. Corn and cob meal should never be fed to hogs as the hogs cannot digest the cob in the meal and there is too much bulk to get desirable gains.

The corn that is fed should be properly supplemented with a protein feed for best results. On farms where there is a supply of skim milk or buttermilk, no other protein feed need be purchased. This by-product from the dairy is one of the most desirable forms of protein supplement for fattening hogs. One hundred pounds of skim milk or buttermilk only contains about ten pounds of dry matter, but the dry matter contained is so easily digested that it makes a desirable means of balancing a ration.

In rations where a protein supplement is used, the daily gains are greater and the amount of feed required to make one hundred pounds of gain, less than where no protein supplement is used. The results of the work at a number of the Experiment Stations of the country might be used to illustrate the difference in gain and the amount of feed necessary to make one hundred pounds of gain. In these tests one group of swine were fed corn alone while the other group was fed buttermilk or skim milk in addition to the corn. Both groups of pigs averaged from 106 to 108 pounds live weight when the tests were begun. Both lots received an average daily ration of 5.09 pounds of corn per pig, except that one lot received 12.58 pounds of skim milk or butter milk in addition to the corn. The pigs that received corn alone made an average daily gain of 1.04 pounds per head daily while the other lot made a gain of 1.66 pounds per head daily. The group fed corn alone averaged 184.5 pounds at the close of the feeding trials while the other group weighed 229 pounds or in other words, were ready for market in a much shorter period of time than the other lot. The pigs on the sole ration of corn consumed an average of 493 pounds of shelled corn to make one hundred pounds of gain while the other lot required 302 pounds of corn and 800 pounds of skim milk or buttermilk. There was a saving of about 190 pounds of corn when 800 pounds of buttermilk or skim milk were used in addition to the greater daily gain.

Tankage has been used very extensively as a protein in swine feeding. Next to buttermilk or skim milk it is regarded as the most desirable source of protein. It is rich in protein and mineral matter and easily digested. When fed to hogs receiving ear corn, the most desirable method of feeding is to put the tankage in a self-feeder and let the hogs balance their own ration. If no self-feeder is available, it can best be fed in a trough and allowed at the rate of one pound of tankage to every twelve pounds of ear corn allowed. This will make a well-balanced combination.

The summary of a number of experiments conducted at six of the prominent experiment stations indicate the value of feeding tankage in addition to corn in fattening swine. In these tests about 270 pigs were used. In each case one group of pigs were fed a ration of corn alone while the other group were fed a ration of nine pounds of corn to one pound of tankage. The corn was calculated on the basis of shelled corn. The average weight of the pigs at the beginning of the feeding period was 136 pounds for the corn alone group and 138 for the corn and tankage or meat meal group. The average weight at the close of the feeding period was 216 pounds for the corn alone group and 262 pounds for the corn and tankage groups.

The average daily gain for corn alone group was 1.115 pounds per head daily while the second group gained 1.74 pounds per head daily. There was not only a marked difference in the gains made but also in the amount of feed consumed to make 100 pounds of gain. Where corn alone was fed, the hogs required 546 pounds of corn to make 100 pounds of gain while in the other groups, 380 pounds of corn and 40 pounds of tankage was consumed for every 100 pounds of gain. The average of these tests shows a saving of 166 pounds of corn and 40 pounds of tankage allowed. These trials show the importance of properly balancing the ration for hogs in the fattening lot. The cost of the protein may seem high but it is money well spent.

There are a number of other feeds that can be used to supplement the corn. Fish meal will take the place of tankage or meat meal and do equally as well. Oil meal, soybean meal, wheat middlings and similar feeds may be used but they are not as economical nor as satisfactory as the protein feed from an animal source.

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Wyandottes	1.75	2.00
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Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Tuberculosis.—A short time ago we slaughtered a hog for our own use that had been troubled with a cough, but showed no sickness and grew well. The only suspicious thing we found about him was in throat, which when cut open appeared some like mustard seed. What ailed the hog and was the meat fit to eat? B. H., Hazlewood, a. Doubtless your hog suffered from tuberculosis of throat glands. The rest of carcass was doubtless fit for food. I might say that tuberculosis in hogs is on the increase, especially where they are allowed to run with cattle and are fed togethed. I understand at Chicago, where millions of hogs are slaughtered annually, some 14 per cent are tubercular.

Warts.—Have a valuable calf with perhaps fifty warts on its neck, some of them are large. Have been applying castor oil, as I was told it would remove warts. O. O. M., Cambridge Springs, Pa. Cattle are affected with two varieties of warts. One, the Verruca Vulgaris, is composed of a cluster of enlarged papille, covered with a thickened epidermis, the number of papille determining the breadth, and their length its height. Causes—An abnormal nutrition of the skin, determined by increased energy of growth operating upon a healthy skin; at other times, upon a weak or impoverished skin. A wart with a well defined neck should be cut off, with either a sharp knife or snipped off with scissors. When broad and flattened they can be dissected out, and wound touched with nitrate of silver. If large and vascular, likely to bleed too much, they may be ligated, one by one, this method prevents treatment for hemorrhage. If the warts persist in growing burn them with a redhot iron. Very often warts will quickly disappear if they are kept moist with daily applications of either sweet or olive oil. Acetic acid is another effective remedy.

Contagious Abortion.—My cows are infected with contagious abortion. Would like to know how to treat them. I do not care to breed them before January, 1921. D. P., Flemington, N. J. Clean and disinfect your stable and keep it clean; sprinkle powdered lime on floor; apply fresh lime wash to stall walls and interior of stable. Burn dead calf and keep stable clean. Separate the aborter from well stock and keep them apart for three weeks. If cow has vaginal discharge flush her with one part lysol and 99 parts water twice a week. Your service bull should be treated before and after service. If your cows come in heat regularly, better breed them eight weeks after they abort. It is not considered good practice to wait too long.

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The last rose of summer is blooming
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By chilly breezes fanned—
The only thing left in the garden
That Susan hasn't canned!

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A Safe, Speedy, Positive Remedy for
Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs and Lameness from Spavin, Ringbone and other bony tumors. Cures skin diseases or Parasites, Thrush, Diptheria. Removes Bunches from Horses or Cattle.
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Split or sawed. Must be straight grained. Highest price. Hilton Collins Co., Incorporated, Louisville, Kentucky.

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Ayrshire Bull Calves From high record A. R. Dams.
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40 head, free of tuberculosis, bull calves for sale
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Ayrshire female calves for sale. Finlayston and Baron best breeding, special mention. [illegible] daughters of "Highland Bally." G. H. Glatfelter, Carlisle, Pa. R 1

Reg. Holstein Bulls from calves to serviceable age. Herd tuberculin tested under Federal and State supervision. BONNYMEADS Farms, Harrisburg, Pa. R. 1

PLEASE say: "I saw your adv. in Pennsylvania Farmer."

COMPULSORY SCHOOL ATTENDANCE

At the request of Pennsylvania Farmer, Prof. W. H. Dennison, Director, Bureau of Attendance in Pennsylvania, furnishes the following digest of the compulsory attendance law:

Section 1414 of the School Code requires that every parent, guardian, or other person, in this Commonwealth, having control or charge of any child, between the ages of eight and sixteen years, shall send such child to a day school in which the common English branches are taught in the English language; and such child shall attend such school continuously thruout the entire term.

The only exception is that a child may be excused by the school board for a continuous period of absence, and by the teacher for a temporary period for physical, mental, or other urgent reasons, but the term "urgent reasons" shall be strictly construed and shall not permit of irregular attendance.

When a child has been absent three days, or their equivalent, without legal excuse, the parent or the person having control of said child shall be notified at once, and if it shall appear that within three days thereafter said parent or person shall not have required said child to return to school, said person having control of said child is subject to arrest and if guilty, to a fine.

If the school district fails to enforce the Compulsory Attendance Law the State Superintendent may withhold the district's entire appropriation.

It is provided, however, in the latter part of this section that school boards in fourth class districts may, at a meeting held any time before the opening of the school term, reduce the period of compulsory attendance for pupils twelve years of age or more to not less than seventy per cent of the school term as fixed in such district, in which case, however, the board of school directors must, at the same time, fix the period for compulsory attendance to begin. It will be observed, therefore, that all children between eight and twelve years of age must attend school continuously during the entire term unless a lawful excuse can be presented for not attending; that children twelve years of age or more are not required to attend for more than seventy per cent of the school term in districts where the board of school directors have reduced the period of compulsory attendance as is provided by law. It should be understood, however, that the period of compulsory attendance is the same for all pupils in a given district; that is, a pupil who has been very regular in attendance during the non-compulsory attendance period cannot count such attendance toward attendance during the compulsory attendance period and absent himself from school a certain number of days during the period of compulsory attendance.

This Bureau has received many communications from parents living in rural communities relative to the employment of children upon the farm or for domestic service in a private home. In relation to this point it should be understood that children under fourteen years of age must attend school regularly during the period of compulsory attendance and may not be prevented from attending school by being kept at home to work on the farm or in the home.

In conformity with Sections 1415 and 1416 of the School Code and with the Attorney General's ruling the Department of Public Instruction has formulated a permit which may be granted to the parent of a minor between fourteen and sixteen years of age for the minor to be employed upon the farm or in domestic service in a private home provided the minor has completed the work of the first six grades of the public schools. This permit is to be granted by the school board or its deputized school official upon proper evidence having been furnished that the conditions upon the farm or in the home are of such an urgent nature that the school board is convinced that the minor should be excused from attendance at school for the temporary period specified in the application for the permit.

I desire to take this opportunity to make a comparison between the requirements of school attendance as such requirements apply to a child living in a rural community and to a child living in an urban community. The directors in fourth class districts, which include nearly all rural communities, may reduce the period of compulsory attendance to seventy per cent of the farm. In a large number of the rural districts in this Commonwealth school directors have fixed the length of the school term at but seven months, or one hundred forty days. If, therefore, this period of compulsory attendance is reduced to seventy per cent in such a district it is readily observed that a child is compelled to attend school but four and nine-tenths months, or but ninety-eight days, out of the entire year, while the child who lives in a district of the first, second or third class, must attend for the full term, as districts of this class may not reduce the period of compulsory attendance.

In nearly all of our districts of the first, second, and third class the school term is nine months or more. This means that the child, whom circumstances have placed in a rural community, may, if the parent thinks more of the returns from the services of the child than he does of the welfare of the child, receive but ninety-eight days of educational training whereby the child who likewise, by no circumstances over which he himself had control, has been born in an urban community, must receive one hundred egihty days of educational training. Notwithstanding this fact, the Bureau of Attendance daily is receiving any number of requests that children may be permitted to remain out of school in order that their services may be used upon the farm or in the home in absolute disregard of the birthright of the child.

MANY VARIETIES GOOD FOR HOUSEHOLD USE

Among the winter varieties of apples adapted to various purposes, the department of horticulture at the Ohio Experiment Station states that the Northern Spy, Grimes Golden, Baldwin, Jonathan, Rome Beauty, Winesap, York, Sutton and Rambo are good for general cooking purposes.

The Delicious apple, which is much advertised and relished because of its wealth of aroma and lack of acidity, is a favorite dessert apple but too sweet for any culinary purposes except baking.

White Pippin and Rhode Island Greening are not as good as the other varieties for cooking purposes.

Ben Davis, Gano and Black Ben when carefully stored until spring are fair for either eating raw or cooking. Burying in pits improves the quality of these varieties.

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IT HEATS WHOLE HOUSE—KEEPS CELLAR COOL —AND USES LESS FUEL (coal or wood) than Stoves or other heaters. It is EASY to install and operate.

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AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
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The Bankers' Place in Agriculture

Secretary Meredith Points Out the Duty of Bankers Towards their Communities

Editor's Note—The following article is made up of extracts of an address delivered by Secretary of Agriculture Meredith before the American Bankers' Association which met at Washington last week. Owing to the national interest in the problem of properly financing agriculture at this time we believe the Secretary's remarks will be appreciated by farmers.

What Agriculture Means

The farming industry of this country is of considerable proportions, representing an investment equal to that of all the railroads, all the manufacturing plants, all the mines and all the quarries in the United States. Essentially, it is the basic industry. The income from live stock and crops for a single year practically equals the entire national debt. In other words, agriculture represents a permanent investment of 80 billions of dollars, and its output last year was valued at 25 billions. The greater part of the output of this enormous enterprise comes almost to the door of American business. The manufacturers receive from it, directly or indirectly, the materials that go to make up their finished products. Bankers employ their deposits in facilitating the exchange of products between the two. The railroads and other carriers, including the comparatively new and important enterprise of motor transportation, have as their principal purpose of carrying of commodities from one to the other. The merchant has on his shelves many of the products of the farm, and with many of of them, the farmer is the largest customer.

Tremendous sums of money are required every year to finance crop production and movement. It is incumbent upon bankers, therefore, to inform themselves fully regarding all phases of agriculture to keep in touch with current crop and livestock conditions as shown in the crop and market reports of the Department of Agriculture, to appraise properly the business factors which influence crop and livestock production in the future, and to understand the work of the Federal and State Departments of Agriculture, the State colleges of agriculture, the extension service, and other public agencies for promoting sound agricultural practice. In no other way can they hope to deal intelligently, fairly and adequately with the individual problems of their farmer clients or to co-operate effectively with Federal and State agencies in their efforts to make the business of farming more efficient, economical and profitable.

Many Bankers Help Farmers

Bankers, as I said at the outset, have done many things to encourage agriculture. The entire commercial cantaloupe industry of America, for example, was inaugurated by the bankers and business men of Rocky Ford, Col. The town was settling down into a rut of mediocrity, but in a few years it doubled in population and increased wonderfully in prosperity. Good hotels, fine stores, and paved streets replaced the ramshackle condition of the town, and the Arkansas valley for a hundred miles took on a prosperity which has since been communicated to many other and still larger areas. The cantaloupe industry has entirely outgrown its small beginnings, and the bankers who nourished it in its infancy have received in increased business many times more than the sums they advanced.

I could take up the entire time which I have at my disposal in recounting the many activities of the bankers in financing all sorts of farming operations—irrigation projects, drainage ditches, sugar-beet factories, canning industries, creameries, packing plants, cheese factories, boys' and girls' club work, a thousand things that have helped to develop agriculture and to increase community prosperity. In individual cases, they have gone outside their regular field and have provided general bureaus of information for their constituents. More generally, however, they have limited their assistance to agriculture to cases where extension of credit was more or less directly involved. Many a community owes its improvement in breeds of swine, dairy and beef cattle, sheep and other domestic animals to the active interest and effective help of the local banker. The introduction of soil-building forage crops, which have added not only to the immediate profits of the farmer, but have laid the foundation for even greater prosperity in years to come; encouragement in the keeping of farm accounts; the development of diversified farming —in all of these things the banker has given valuable aid. He has been far-seeing enough to know that this kind of assistance extended to the farm is profitable to the bank. It is apparent to the thinking banker that diversification of crops makes loans more certain because, if the main crop fails, the farmer can subsist on the returns from other crops and perhaps repay a part of his loan.

A Peaceful Scene on a Lancaster Co., Pa., Farm

Bankers Administer Public Trust

Every banker should feel it his duty to see that the capital which he controls is directed into truly productive channels and into the hands of the most efficient users of such capital. The honest and efficient landless farmer should be aided in every possible way to purchase the land he tills, while speculation in land on the part of those who have no intention of using it should, in general, be discouraged. Nearly every transfer of a piece of land to a landless farmer involves a larger or smaller sum of mortage credit which the local banker, in many cases, is in a position to furnish, either directly or as the agent or local adviser of other institutions or of individual investors. The opportunities and duties of rural bankers are especially large in this connection.

In addition to mortgage credit, there is frequent need on the part of farmers for short-time or personal credit. In the case of the man who owns and has paid for his farm, the supplying of such credit raises, as a rule, no serious problem. In the case of the renter, however, and of the younger farmer who is just starting out as an owner, the question of short-time credit continues to be a difficult one. In such cases, bankers should realize that personal credit can and should be based, to a considerable extent, upon character and productive ability. To deny such credit to the honest, ambitious, energetic farmer because he has little tangible security to offer is to lessen the productivity of available capital and to discourage the man who in the future should be a land-owning farmer.

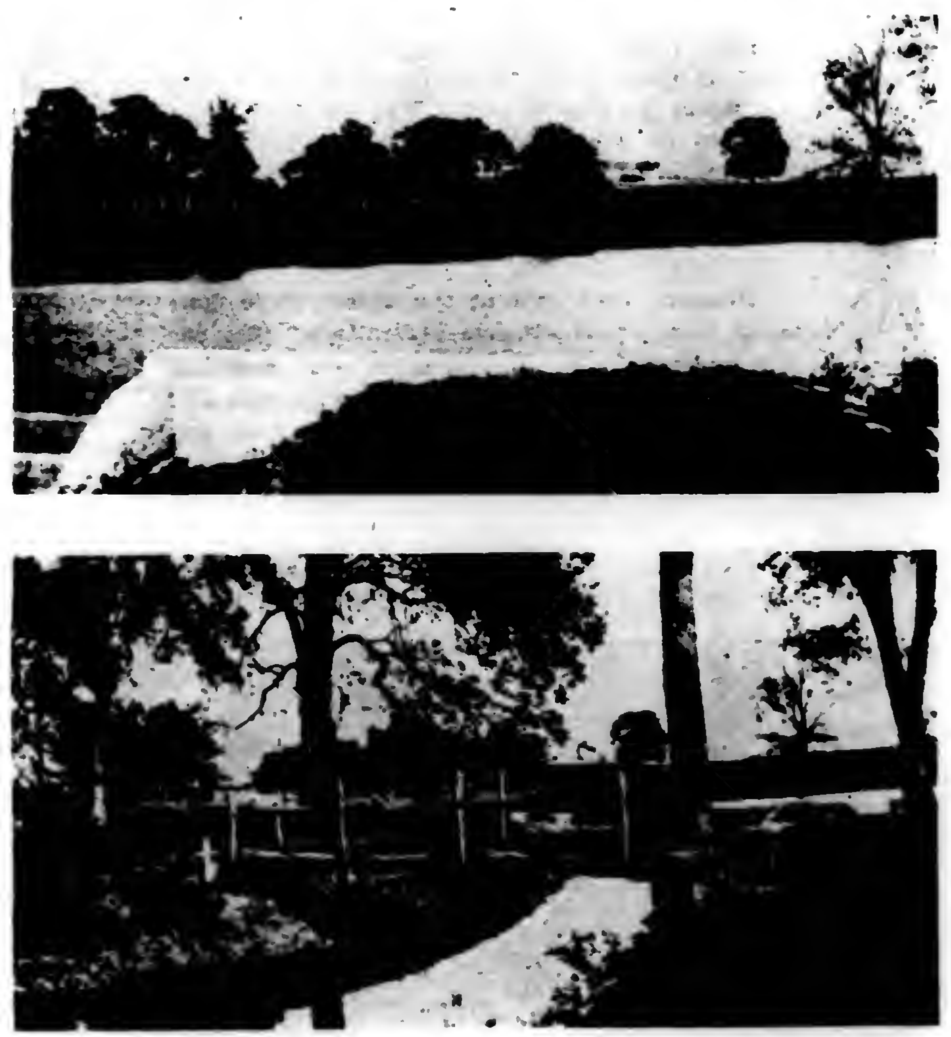
You are familiar with fact that one of the principal factors which cause business failures is lack of sufficient working capital. This is as true of farming as it is of other lines of business. Capital is needed by a farmer when he buys lands; when he improves it with fences, dwellings, barns, and other buildings; when he drains or irrigates it; when he buys live stock for breeding or feeding purposes; when he sets out an orchard; when he hires labor to cultivate and harvest his crops, or when he wishes to market them. These needs are legitimate needs and the farmer will naturally and rightfully look to his banker to finance his operations. Because of the splendid security the farmer has to offer, because the farmer himself is a good risk, because the success of farming depends upon a sufficient amount of working capital, and because successful farming—and in the definition of successful farming I include profitable farming—is essential to the prosperity of the whole community. It is incumbent upon bankers generally to give to individual farmers who apply for loans the same consideration and the same service which they would give to any other class of business men. This leads me to suggest to you a plan which is already in operation by many country banks and which enables them to keep in close touch with farmers, to understand their needs, to assist them in various ways, and at the same time, to promote the business of the bank. This plan is the employment by their loan departments of a specialist trained in agriculture who will circulate over the county, get acquainted with farmers, attend their meetings, advocate improved methods of agriculture, and explain the banking business to them. Splendid results have been secured in this way by cultivating friendly relations with farmers, helping them intelligently in their problems and when they need financial accommodations, and encouraging them to build up a good bank account.

Co-operative Enterprises Important

What I have said regarding the financing of individual farmers applies with equal or greater force to the financing of groups of farmers and organizations of farmers. Farm organizations are developing rapidly in many communities, especially since the close of the war, generally for the purpose of collective buying of farm equipment, machinery, fertilizers, and other supplies, or for the marketing of farm products. These enterprises, when properly managed and financed, are likely to effect real economies in buying, marketing and distribution through the pooling of orders and shipments and the adoption of improved methods of grading, storing and handling, resulting in a better and more uniform product to the consumer. They are therefore entitled to every reasonable encouragement which Federal and State institutions can extend to them, and this obligation extends equally to the banks of the country. It is possible, and even probable, that some of these co-operative enterprises will be opposed by some business men who are financially interested in the storage, handling, marketing, and distribution of farm products. In such a situation, it is not too much to expect that bankers will see to it that the farmers and their organizations have a square deal and an equal opportunity to obtain the financial assistance they need

I think you gentlemen fully realize that if the farmer is to continue to produce and to meet the food requirements of the Nation he must receive adequate prices for his products—prices which will enable him to provide a satisfactory standard of living for himself and for his family. The farmer is not the only one who would be adversely affected if he fails to secure a reasonable return for his efforts. He will suffer, of course, if he stops producing, but the banker, the manufacturer, the merchant will suffer also. Every banker, every business man in America, is or should be interested in keeping the farmer on the farm and in having the farm operated to its reasonable capacity, turning as much as possible into the channels of trade, manufacture, and transportation, and this means that they must see to it that the farmer gets fair treatment in disposing of his products.

Isn't the present situation one which demands the best thought and sympathetic consideration of the bankers of America and, in fact, of all the people of the country? Should they not address themselves earnestly to the task of aiding the farmers in their respective communities to tide over this difficult period and make their plans for next season's operations? I sincerely hope that the bankers will measure up to their responsibilities, both as citiens and as bankers, in this important matter, that you will discuss in your association meetings the problems involved, and that you will see to it that, so far as possible the farmers are properly financed not only to protect them from unwarranted losses but also to stabilize their business and to insure adequate food production in the future.


Ice Dam on Clover Hill Farm, N. J. Note Rustic Bridge Over Creek

Successful Spraying Project

Ever since the organization of the Farm Bureau in Carbon County, Pa., in 1917, an annual farmers' auto excursion is to bring before the farmers of the county some of the work that is conducted through the Farm Bureau on the various farms. On August 28th, this year, the third annual excursion was conducted. This tour took in a few of the farms in the beautiful Big Creek Valley. Due to the fact that two of the major projects of the Farm Bureau are fruit growing and potato growing, arrangements were made to stop on farms where either one or both of these projects were carried on during the season. Most of the farms in Carbon County have anywhere from 100 to 300 or 400 large apple trees and along with this anywhere from 5 to 25 acres of potatoes are grown by these same farmers. From the very persuasive results of potato spraying in this county in the season of 1919 most of the farmers were convinced that in order to grow the best crop of potatoes it was essential that they had to be sprayed along with the other necessary operations. But many of the farmers were of the opinion that they could not afford to invest as much money as the price of a sprayer for their acreage of potatoes only. But after they had been told that there are combination sprayers on the market that can be used to spray potatoes and also fruit trees, ten farmers each invested in a sprayer of this type to be used on their farms.

Due to the fact that fruit spraying is a new operation to most farmers in the county the County Agent arranged to keep the farmers informed as to the right time to apply the different sprays, and the kind of material to be used. At a number of places he was present when the various sprays were made and helped to apply the same. Pruning demonstrations were held in the various communities so that farmers would be sure to cut out any superfluous wood before spraying operations were started. In many of these orchards the trees were old and big and contained a great deal more wood than necessary to grow a good crop of fruit. In the orchard of Q. O. Buck where the auto excursion stopped and where the noon hour was spent, considerable pruning was carried on by two students of State College during the Easter vacation. This orchard like all of the rest received four complete applications of spray materials, viz., the delayed dormant; the pink, or scab spray; the first codling moth; and the second codling moth and scab spray. Besides these sprays one block of trees received a fifth or summer spray for sooty fungus. All of the 160 trees in this orchard are very large and for the past five years the yield did not average over 150 bushels. This year the same orchard will without a doubt yield 2,000 or more bushels of perfect, or very nearly perfect fruit.

Conditions like the above were seen in the orchard of Hiram Christman on the same tour. His trees are younger and the yield is somewhat greater. Many of the trees that in previous years hardly produced a bushel of poor apples, are this year bearing a load of anywhere from 20 to 45 or 50 bushels of the choicest fruit. The farmers who accompanied the auto tour could not help but be impressed by the wonderful results of one season's care to the fruit trees.

The results of potato spraying were equally as impressive to the farmers due to the fact that most of the unsprayed fields were very badly blighted at that time. The sprayed fields that were visited could not help but prove the value of spraying, due to the fact that the four rows that were left unsprayed were blighted to a certain extent and a much greater per cent of the leaves in these rows were dead, than in the sprayed rows. Two of the potato fields visited did not show any signs of blight where they were sprayed, but each of these fields had already at that time had four applications of Bordeaux mixture; while two other fields that had also been sprayed but only two and three times showed signs of blight at various places. Especially at low places. Shortage of labor and frequent rains prevented the applications at the right times.

On the farm of Mr. Frank Schweitzer a seed source test is being run and in this potato field the seed which came from the following sources, Michigan Rogued seed, Carbon County Rogued seed, and Carbon County Bin Run seed is being tried out together. The appearance of the stalks in the various rows shows a vast difference and by digging time the results on this work will be compiled. There is no doubt from the few stalks that were dug on the day of the excursion, that the well selected seed will yield a great deal heavier than the bin run seed.

Fifty-five automobiles were in line on this excursion and close to three hundred farmers and their families saw the results of the projects that are carried on.—Nicholas M. Rahn, Co. Agent.

THE NEW YORK AGRICULTURAL PROGRAM

By Steven Courtjey

In Syracuse on September 7 a conference was held under the auspices of the State Department of Farms and Markets. Commissioner of Foods and Markets, Dr. Eugene H. Porter, who arranged it, invited to the meeting men who were expert in every element of modern business in any way connected with agriculture. There were expert bankers, and even expert telephone men. It could not be doubted but that the meeting assembled as experienced group of men to discuss agricultural problems as could be found.

The big point which was brought out at the meeting disclosed this important thing—that transportation, tho serious, was remediable; that the farmer could depend upon the express companies to give them efficient service, that there would be no permanent trouble in financial dealings with banking institutions.

Examples were given by men on the inefficiency and general wrongness of the present system that stirred every man present. Silas L. Strivings, who is president of the State Farm Bureau Federation and perhaps better known as the vice-president of the American Farm Bureau Federation, stated that 90,000,000,000 bushels of grain were sold on the Chicago Grain Exchange last year, or ten times the amount farmers could ever hope to produce. It shows speculation in the foodstuff of the nation and robbery of the farmer through manipulation of the harvest he has made and probably sold at a price verging on the cost of production.

Mr. Strivings, who has travelled more than 9,000 miles for the American Farm Bureau Federation during the month of August investigating farming conditions, told of many other astonishing and, from the farmers' standpoint, terrible things. And the cause of it is, he says, a wrong system of distribution.

It was the belief of every man at that meeting that the present situation was a menace. As a result of the meeting, a resolution was drawn up empowering the two commissioners of the department of farms and markets of the state to appoint a committee to draw up a definite and comprehensive agricultural policy adopted to the needs of New York state farming, and a program for carrying it out efficiently and well.

It is not difficult to judge upon just what principles that policy will be drawn up. It will argue from the fact that the spread between the producer and consumer is too large and establish a program for eliminating that spread in as many ways and food commodities as possible. Without a doubt one of its big planks will be to secure legislation permitting collective selling, which is, indeed, already favored in the state. With this protection every aid will be given farmers to establish storehouses. With these built, the farmer will have sufficient control of his non-perishable products, at least, and a way will be open to control gradually perishable products, which form a big bulk of the production of the state.

But the leaders do not deceive themselves into thinking that this step will be the open sesame to stabilized prices and prosperous farms. Next must come the question of credit. It is plain the farmer cannot store his products interminably without realizing on it. If he does, credit must be extended. And because control of any product must be regulated to some degree the next step will be to secure the establishment of a state agency which will make exhaustive investigations into the cost of production of various crops. Armed with this weapon, the farmer will be able to refute all question of profiteering.

Another step will be to secure permanent recognition of the fact that all public offices of an agricultural nature in the state must be filled with farmers or farm trained men in sympathy with farmers. There are also a number of minor points which will enter into the program, such as protection of all tillable and tilled land from irresponsible vandalism, and the like. But the four factors above are considered the fundamental ones.

It will at once be seen that this tentative program as outlined by farm leaders of the state, coincides almost in every detail with the national agricultural policy as outlined in the planks which farm interests secured the incorporation of in the national political party platforms. Thus the state has aligned itself in the beginning with agriculture of the nation which will surely strengthen all measures it succeeds in having adopted.

One thing is clearly understood in formulating this policy and the program which will carry it into effect. Because of its nature, no referendum can be held on farm policies. Farmers must depend upon their leaders. Fortunately, New York state is blessed with a group of these men who are not only authorities on agriculture, but also responsible as well. That has been proven time and again in the past year when serious problems have arisen and some decision must be made without waiting for farm opinion. Not once have they blundered.

A happy augury for the success of the great undertaking which now is getting under way, tho it is entirely unheralded, is the increasing power which New York farmers enjoy. It has come about with greater consolidation of interests. The State Grange, the Farm Bureau associations, and the Dairymen's League, have been working in entire harmony for many months. The fruit of it is the G. L. F. Exchange incorporated for a million dollars. It is not a question of the exchange itself, but rather of the combining of interests and the unification of purpose which has arisen from the establishment of the organization. The farmers of the state are always G. L. F. men as well as Grange members, or League members, or Farm Bureau members.

There are many loose ends still to be tucked in before the work can really get under way. It has been suggested that New York agriculture must establish a central bureau for disseminating information concerning its aims and the reasons for them. It is believed by some farm leaders that one of the main policies of the state farming industry should be "open covenants openly arrived at," as President Wilson so clearly stated the principal. It is believed that if no secret is made of any purpose, if every consumer may read and understand each and every development, the work will be so much easier of accomplishment. The means is at hand through the centralization of interests which has been mentioned.

A well known leader in the state's agricultural development aptly phrased the necessity of the movement as the "life of both of us," referring to the farmer and the consumer. He believes that New York state farmers should undertake to solve their problems by adopting the methods of successful business corporations. For instanee, it was pointed out that New York state lead the country in production of apples, yet the states of Washington and Oregon had better sales and greater profits. He said that New York should change from a "barrel" to a "box" apple state because it would be so much easier to market the fruit in this way. New York is also the premier potato state of the Union, but is not so famous for this as Maine or Michigan.

New York state has started a movement to place its agriculture once and for all upon a profitable basis. It desires to reclaim those 30,000 idle farms it cannot boast about. It has the tools at hand. It asks the right of collective selling, establishment of a suitable rural credit system, farmers in public offices connected with agriculture, and state investigation into costs of production. As in almost every industry of the nation it expects that some action will be taken as soon as a new regime is inaugurated in office. It will be an interesting campaign—and worth watching. There is determination in every act made in the agricultural industry of the state. Something has got to happen.—Robt. L. Voorhees, Onondaga County, N. Y.

RUST IS COSTLY

Farm implements either wear out, rust out or break. A break, as a rule, does not permanently disable the machine—a new pair repairs the damage.

A machine does not wear out for a long time unless rust is permitted to get in its deadly work. And rust is easily prevented. A little good metal paint having rust inhibitive properties will prevent rust. A supply of it should be kept on every farm and used to touch up bare spots.

Profiteers will continue to flourish as long as purchasers are content to say to the dealer, "Wrap it up" instead of "How much?"

Soils and Fertilizers

Conducted by Dr. J. G. Lipman

Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

The problems of weed eradication must of necessity become more important as the cost and value of crops increase. These problems are numerous and varied. The landscape gardener must think of dandelions, plantain and other troublesome intruders in lawns and golf courses. Poison ivy is often annoying and at times dangerous. Wild mustard causes far-reaching losses where oats are extensively grown. Thistles, burdock and ragweed are a few others of the numerous undesirables among weeds.

The problem of weed eradication by means of chemicals may be considered from the standpoint of spraying or from the standpoint of solid treatment. In applying the first of these methods the use of sulfate of iron and of copper sulfate seems to offer promise of more or less effective relief. In the soil treatment method common salt, sodium cyanide, carbon bisulfide, formaldehyde and ground sulfur seem to stand out as possessing distinct value.

Among experiments recently reported on the eradication of dandelions in lawns these are those by the New York Experiment Station at Geneva. The experiments in question have covered a period of eight years and have led to the conclusion that dandelions in lawns may be eliminated at comparatively slight cost and with but little if any injury to the grass. In the application of the material, one and one-half to two pounds of iron sulfate are dissolved in a gallon of water. It is estimated that 175 pounds of iron sulfate dissolved in, round figures, from 85 to 120 gallons of water would be sufficient for a single application per acre. However, in order to secure effective control, three to five thorough applications per season are necessary. The first application is usually made early in the spring after the central blossom buds are formed and prior to blossoming. Subsequent applications are made at intervals of three to four weeks, and again in the late sumer or fall. The experience of the New York Station show that, in view of the introduction of dandelion seed from the outside, it is necessary to spray every second or third year to secure a clean lawn. It is suggested that spraying should be discontinued through the dry, warm weather of midsummer. Otherwise, more or less permanent injury to the grass may be caused. Such temporary injury to the grass as may occur after spraying is obliterated in a short time. The grass recovers and seems to be more vigorous than if it had not been sprayed. On the other hand, white clover—so valuable a plant in our lawns—is killed by effective spraying. The best results are secured by supplementing spraying with applications of fertilizer and the use of more or less fresh grass seed in the spring. The experiments of the New York Station confirm those carried on in the northwestern states on the control of wild mustard in oats and barley. It would seem, therefore, that, with proper precautions, iron sulfate, and to a lesser degree copper sulfate, lend themselves readily and economically to the control of certain weeds.

Where all vegetation is to be destroyed by spraying, as is illustrated by recent efforts to destroy the Japanese beetle in Burlington County, New Jersey, or the gypsy moth in New England, materials like kerosene or crude oil may be employed. This will, of course, destroy all vegetation in zones that are to serve as boundaries for quarantine areas. Weeds and shrubs may thus be destroyed along roadsides and hedges. In such places weed eradication may also be accomplished by means of soil treatment by chemicals. The Japanese beetle control in New Jersey shows that applications of salt at the rate of two tons per acre will rather effectively destroy vegetation. However, a second application may become necessary later to assure complete destruction of vegetation. It appears in the case of common salt that volunteer asparagus, wild morning glory and poison ivy are quite resistant and must receive rather large quantities of salt before they show marked injury.

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Our Job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Paying the Piper

THE WORLD is staggering under a debt of two hundred and sixty-five billion dollars. The amount is so big that we spell it out as few people are sure of their figures when it comes to sums so immense as this one. This is the central fact around which all discussions about future business must revolve. The world has got to pay its debts the same as an individual. It will either default and go into bankruptcy, or it will buckle down and economize more and work harder. A pamphlet issued by the Corn Exchange Bank of Philadelphia has the following to say on this subject:

"If there is any other way of paying a debt, we don't know it, and it has got to sell the fruits of its labor—and to sell it must have buyers. First, capital or credit; second, production; third, buyers. There is no other way out but bankruptcy—and this country is going to supply the credit in some form or another, because we will have plenty of excess credit when we shall have reached anywhere near a normal basis of domestic values. As our production increases, prices will recede. As prices recede, funds will become more plentiful. Indeed, if we are to do our part in world rehabilitation, we've simply got to have a lower range of values in order to release the necessary credit—and allow us to overcome the handicap of the low foreign exchange—a handicap equally severe to the concern abroad who must have our raw material."

No Cause For Alarm

IT IS probably not worth while to recall the pessimistic wails that filled the air six months ago concerning the country's food prospects. It was stated in all seriousness that starvation stared this nation, as well as Europe, in the face, because it would be impossible to produce enough food, owing to lack of help, etc. The beautiful fall shows why prophets are often without honor. Barns and bins are filled to overflowing with the results of the farmers' efforts and there is plenty for all, and much to spare. People of all classes can usually be relied upon to rise to an emergency and do the thing that seemed impossible. It is because of this ability that the race progresses. In this instance, farmers adopted systems and methods that were more efficient than the old, and used implements and machinery which brought greater results than did the deserting farm laborer. And the end is not yet. The country will find the farmers able to maintain production, providing they are accorded fair prices, even if consumption continues to increase.

Again the pessimist sees starvation inevitable because of the fall in prices. We are anxious that farmers shall receive the very best prices possible, but we know that farmers realize that the lowering of commodity prices in all lines is inevitable and even desirable. We also believe that farmers as a class will continue to urge equal treatment for all classes and industries with special privileges for none—not even for themselves. We do not believe any good is accomplished by over stating facts or making false prophesies. Farmers will weather the present deflating period, and do it without being especially favored by the government. All that is required is to see that they get the same treatment as is accorded other big industries.

Farm Profits

WE HAVE not noticed the city papers falling over themselves to quote from a recent report of the Department of Agriculture on the result of its survey on farm profits. The report, which is the result of the study of the subject in certain counties in Ohio, Indiana and Wisconsin, states:

"That comparatively few of the farmers in the groups studied have been making large profits during the recent years of comparatively high prices.

"That their average return on investment increased from about four per cent in 1913 to 7 per cent in 1918.

"That most of them are making less than $500 cash per year over and above the things the farm furnishes towards the family living, which, however, constitute a very important factor."

We are not given to creating discontent, but, on the other hand, we do not wish to let the unfounded assertions that farmers are profiteering go unchallenged. Every one knows that farmers who had anything to sell during the past five years have had more money than they ever had before for the same amount of products. It should also be known by every one that the net returns did not leave the farmer the average wage income of the country, due to the greatly increased cost of production. Figuring the other fellows profits may be interesting but it is not instructive.

The Plight of the Schools

BECAUSE the newspapers have in the main ceased their nine-day's discussion of the teacher shortage, an impression is growing that the situation has improved and that the schools of the nation are satisfactorily "manned." Such is not the case. The National Education Association has published the results of an investigation made thruout the United States and these figures show that there is an estimated shortage of about 40,000 teachers. In addition to this discouraging situation it is reported that fully 52,000 of those who are teaching are below standard—that is, they have not had sufficient experience for their positions, have not been sufficiently trained, or are too young.

This is a subject in which parents should feel a genuine alarm. The proper education of the coming generation is their most vital problem, next to making a living. No parent can afford to have the proper schooling of his children interfered with, and should not tolerate the continuance of poor schools and inefficient teachers. The excuse that it is but a temporary situation is not valid. Time is moving on and every year's schooling missed or wanted is lost forever to the child. Of course, the real cause of the shortage of teachers is because teaching does not at present pay wages equal to what other callings offer, and school officials have not the funds to pay more. There is but one answer to this problem: Teaching must offer as good inducements as to returns as other business does for the same ability. How this financial difficulty can be met is a problem for an understanding and sympathetic Legislature and Governor. All the states in our territory are able to raise the money, else the business world could not afford to pay enticing wages and salaries, and the people interested in schools must give their undivided attention for a time to correcting the fundamental trouble of the present time.

We believe this is a good place to repeat our educational platform for the benefit of those interested in improving rural schools:

1. Some women on every school board.
2. Centralize the grammar and high schools in fully equipped buildings and furnish transportation.
3. Revise the curriculum and re-write the text books to meet the needs of rural conditions.
4. Equip the centralized schools for household economics and industrial training.
5. Revise the state's tax laws so as to provide sufficient funds without distressing any class.

Banking Accommodations

SOME TIME ago we asked editorially that our readers write us in answer to the question, "Do farmers find it more difficult to borrow money now than three or four months ago?" We received a goodly number of answers and all but one stated that credit was harder to obtain than it was in the spring. In many instances it was stated that the local banks explained that they did not have money to loan. In most such cases it is very possible, if the officials had explained the reason, they would have said that the money, often that belonging in the community, had been loaned in the big centers to be used as "call money" at high rates of interest. While it is no doubt "good business" to have the money earn as much as possible, it is not treating the home community right when the money is needed for the further development of home industry. Some rural community banks realize this and take care of the home folks first. The Grove City Bank at Grove City, Pa., is an example of what a country bank may do for its local patrons. We believe that if farmers would put up an intelligent protest against the practice of sending the money away from the community to be loaned to grain and other speculators in the city, whose activities are often detrimental to farmers, that their banks would not so frequently be short.

A circular letter sent out by a bank in a small town in Chester County, Pa., to its farmer patrons shows the right spirit and we give an extract here as a suggestion to others:

"If all other industries stayed on the job and produced as do the nation's farmers, there would be little talk of dissatisfaction and unrest.

"Every farmer in this locality will have need of a strong, accommodating bank in his business operations in the market season ahead and this Bank is ready again this year to take good care of all our customers. Banks generally have put the soft pedal on loans where the money is to be used for unnecessary luxuries or speculation. But we realize that the financial requirements of farmers are paramount to nearly all others. Every reasonable and legitimate need of our farmer customers will have prompt consideration."

Our Washington Letter

A committee representing thirty farm organizations, appointed during the meeting at the National Board of Farm Organizations' headquarters, and headed by several Southern Senators and Congressmen, called on Secretary Houston of the Treasury Department and Governor Harding of the Federal Reserve Board, and presented the case of the farmers in plain, vigorous terms. The government officials were told that the products of the country were facing bankruptcy unless some means were provided by the government at once for giving the farmers an extension of credit, and air given by the government in opening the markets of Central Europe to our farm products.

The spokesmen for the farmers urged the revival of the War Finance Corporation, extending credit to Germany, and a lower rate of discount. Senator E. D. Smith, of South Carolina, charged the Federal Reserve System with making 100 per cent, when it was allowed only six per cent by law.

Secretary Houston listened attentively to the arguments of the farmers' representatives, but promised them nothing. He declared that the decision of the Treasury Department not to revive the War Finance Corporation had been approved by President Wilson. He opposed further extension of credit to Germany and let it be known that the policy of the administration was against any further inflation of credits. He denied that he had made any statements reflecting on the prices of farm products, but asserted that he had said that the Treasury Department would not be a party to any plan of backing commodities for speculative purposes.

Governor Harding, of the Federal Reserve Board, issued a statement in which he refused the demands by the farmers for credits by Federal Reserve banks on farm products that would enable them to hold their crops for higher prices.

"In view of the representations which have recently been made to the board as to the unavailability of credit in agricultural sections," said Governor Harding's statement, "the board requested information concerning credit conditions thruout the country from the chairmen and governors of Federal Reserve banks at their usual autumn conference here this week.

"The board is advised that credit has been steadily available for the successive seasonal requirements of agriculture, as well as for the needs of commerce and industry, and that there is no ground for expecting that its availability for these purposes will not continue.

"The present improved credit situation is due in part to the timely steps taken last spring, following conferences between the board and governors and directors of Federal Reserve banks to provide credit for crop moving requirements, and in part to the subsequent improvement in transportation reported from all districts except in a few localities.

"Between January 2 and October 1 of the present year about 800 leading member banks from all sections of the country which report their condition to the board weekly and which represent approximately 70 per cent of member bank resources, have increased their loans for agricultural, industrial and commercial purposes by an amount exceeding $1,800,000,000. This great increase in the credit extended to their customers has in the main been made possible by the accommodation extended member banks by the Federal Reserve Board.

"During the same period the twelve Federal Reserve banks have increased their holdings of agricultural and commercial paper by more than $500,000,000, and from January 23 to October 1, 1920, increased their issues of Federal Reserve notes by over $460,000,000.

"At the same time Federal Reserve banks having surplus funds have extended accommodations to Federal Reserve banks in agricultural and live stock districts by means of discounts, aggregating on October 1, over $225,000,000.

"The disturbances in price and demand which have recently manifested themselves in markets for various agricultural and other commodities, not only in the United States but in other countries as well, are inevitable and unavoidable consequences of the economic derangements occasioned by the world war.

"The United States continue to have a heavy volume of exports altho foreign demand for certain agricultural staples has somewhat decreased. But the chief market for our raw and manufactured products is at home, and our present huge crops of immense value may be expected gradually and in regular course to move from producers to consumers. The recent census, reckoning our population 105,000,000, emphasize anew our own capacity as consumers irrespective of the demands of other countries."

The members of the committee representing the farmers were far from satisfied with the position taken by the government officiasl. They feel that they not only fail to comprehend the serious situation confronting the producers, but do ot show any indication that they care to know the truth.

"If this decision stands this country and the world faces hunger next year," said President Charles A. Barrett, of the National Farmers' Union. "It means that the farmer is the only producer who is expected to sell his product for less than cost. For hundreds of thousands of small farmers it means complete bankruptcy. Small town life will be paralyzed. Entire rural communities will be driven to the cities to join the ranks of the consumers."

On receipt of the news of the decision of the government in regard to financial aid for the farmers, the Georgia division of the American Cotton Association at its annual meeting in Atlanta, adopted a resolution calling upon President Wilson to remove Secretary Houston of the Treasury Department from office because of his "persistently unfriendly attitude toward agriculture."

A convention of farmers will be held in Washington early in December, if plans now under way materialize, at which time much pressure will be brought to bear to induce Congress to amend the Federal Reserve act so that it will meet the needs of the producers.

HARRISBURG LETTER

Discussion of Laws.—With the election for members of the next general assembly only a short time off, talk of legislation is commencing to occupy attention in the State Capitol and some very ambitious programs are commencing to take shape. The Agricultural and Forestry departments will assume first rank proportions in the matter of appropriations for the first time during the coming winter and it is expected some strong support for their activities will be presented in the Governor's message to the lawmakers. The Educational department will be the chief subject and some of the estimates made for it call for over $40,000,000 including the substantial aid for the payment of teachers' salaries and for construction of better schools in the rural communities. The organization being built up under the Finnegan program will put Pennsylvania where it belongs in educational matters, but put a crimp in some raiders on the public treasury. Some of the talk heard concerns efforts to increase revenues so that no cutting of the grants to charitable institutions not under State control will be needed, but if that is done the ultimate withdrawal of appropriations from establishments not created by the Commonwealth will be far distant. The State Poor Directors while here during the last week strongly urged assembling of the laws relative to the poor and removal of anachronisms, while the State Sabboth School Association called in no uncertain terms for a straight out fight by the State to back up prohibition.

To Codify All Laws.—Attorney General William I. Schaffer, who proposes to ask the Legislature to authorize the Governor to appoint a commission of eminent men to codify all statutory law of Pennsylvania, is of the opinion that this real service can be worked out in a few years and the books cleared of many laws which are out of date. The tendency of late years, as noted in this letter, has been to rearrange the laws and the application of the principles of the school, borough, game, highway, fish, health and similar codes to the whole body of the law would put Pennsylvania into a place beside New York and Massachusetts. Governor Sproul is said to think well of the plan and it will be recommended by many attorneys and persons who have had to wrestle with the acts of assembly in Pennsylvania, some of which date from the days of James II.

More Co-operative Arganizations.—A distinct increase in the number of co-operative associations being formed for the purchased of foodstuffs and various materials needed in the small towns and rural districts is shown by State records. Many of these organizations plan to buy produce by the carload lot. The rise of these organizations is being closely watched at the Capitol.

State Dairy Work Advances.—Visit of the Royal Danish Commission on Agriculture to the State Capital and "garden counties" resulted in some complimentary expressions about the development of dairying in the south central section. Unfortunately, the Commission was unable to visit the northern tier and near Philadelphia counties, but the reports submitted indicated the steady advance of dairy work in Pennsylvania.

Foreign Labor Coming.—State agents detailed to ports of entry have reported to Commissioner C. B. Connelley, of the Department of Labor and Industry, appear of a number of immigrants desiring to work on farms. The influx of labor into Pennsylvania, mainly from southern Europe, is probably unprecedented and from what is reported a larger proportion than in other times seems willing to work in fields. Spanish, Slavish and Italian farm labor has been noted.

Health and Music.—In the last week Dr. Thomas E. Finnegan, the State Superintendent of Public Instruction, has named his aides to have charge of the health istruction in the schools, which is to be revolutionized and in which the Department of Health will co-operate. The old system of looking over and scolding is to be done away with and nurses will supplement the medical examination. In the musical line it is the plan to develop singing and thru it to get community singing started. The plan so successfully followed in various parts of the country in war time is to be adapted to all Pennsylvania districts.—Hamilton, Harrisburg, Oct. (25.

NEW JERSEY NEWS

Big Utility Fight.—Great interest is being exhibited by the farmers of New Jersey in the big fight that has cropped up between the old Board of Public Utility Commissioners and the new board of the same character, as it means much to the agriculturists as to which body is to be retained in the service of the State. The old board was ousted by Governor Edwards on charges of misconduct in office and neglect of duty, and his action was based on legislative authority vested in him in the way of removal of a member or members of State boards following a hearing on charges. Gas and electric rates, as well as water rates have been increased to a large extent in the past two years in South Jersey because the old boards granted applications of companies for increases, while the fares on suburban lines in Camden and other counties in the southern jurisdiction have been jumped to a point where rural residents could not fail to make a strong protest. Delegations that attended hearings at the State House in the matter of rates and fares in the past showed that their attitude was totally antagonistic to the moves of the old board, and in the ousting of the members they feel satisfied.

Many Tractors Used.—There has been a considerable increase in the use of tractors on the farms of New Jersey since the 1919 exhibition of the Inter-State Fair here, when extensive displays convinced visiting farmers of their great value. Indications that there will be a further increase in their use has been indicated by the chartering in the office of the Secretary of State of the Colonial Finance Company, a Delaware corporation, which will operate from East Orange, in the loaning of money to dealers and distribution of tractors and the selling of tractors on time or installment sale contracts. The concern has a capitalization of $6,000,000 which is divided into 180,000 of common stock, while the amount of stock that has been issued is 302,150 shares of preferred and 14,443 shares of common stock. The incorporators of the company are all of Wilmington.

Urges Standardization.—Standardization of farm products in New Jersey is the only method of solving the great problem of wants and, needless costs, in the distribution of food products, according to a summary of the work of the State Department of Agriculture for the fiscal year. It was further stated in the summary, that much needed transportation and congestion of markets resulted from ignorance of the buying public as to the quality of produce. The report also said that every success the department has had in the organization of co-operative groups for collective shipment has been a step in advance in the standardization desired. Standardization is therefore urged by the department. Group action on the part of producers in the establishment of grades and brands that go with collective bargaining is the keyword of the report on this phase of the work.

To Inspire Pupils.—Stimulation of the pupils in the rural and other public schools of the State to a better knowledge of New Jersey and its resources and arousing them to a higher sense of responsibility and pride as its citizens of the future is an outline of the purpose sought to be served by a monograph on New Jersey geography, history and civics, which has been made public by the State Department of Public Instruction. Preparation of the monograph is in conformity with a statute passed by the Legislature last year, which provides that a course in the three subjects named insofar as they applied to the State be prescribed by the State Commissioner of Education with the approval of the State Board of Education for elementary grades.—Kelly.

NEW YORK LETTER

Rural Women Politically Apathetic.—W. J. Bean, president of the New York Grange-League-Federation Exchange, the biggest farmers' co-operative agency in the country, scores the farm women of his State for their lack of interest in politics. With the heaviest enrollment of city women voters ever known, who will vote for principles antagonistic to farm interests, every rural vote is badly needed this fall. He urges the little time and inconvenience required to register a vote, and the clear cut issues of vital importance to agriculture as a reason no up state voter should neglect his or her civic duty this fall.

A Perfect October.—Never in the recollection of the oldest residents have we had so perfect an October, one concession of Nature that has favored farm work most materially. There has been but one or two killing frosts in central counties so far.

Report on Cider Ruling.—In response to the urgent appeal of fruit growers and cider makers the Federal Internal Revenue Commission has announced that cider makers must either treat cider to prevent fermentation or sell it in sterilized sealed containers in such a way that it will not ferment, else they will violate the new law prohibiting the sale of cider containing one-half of one per cent of alcohol.

English Market Declines.—New York apples have been going to England very freely for a few weeks past. But growers now find that other countries are sending liberal consignments there too and the demand has declined. Stock shipped from here is offered on English markets in 10 to 15 days.

Ravages of Blight.—Blight in Onondaga county potato fields alone cost the growers of the county $750,000 this year. Careless or haphazard spraying, or the use of commercial sprayers not strong enough in copper sulphate lost the crop, whereas the consistent use of the right mixture, preferably home mixed, resulted in splendid results. One grower had 562 bushels to the acre on seven acres of Ruval Russets after spraying seven times with properly made spray material. The huge loss all over the state from rot caused by late blight is estimated at 40 per cent, and is being felt in a gradual rise in price fo farmers. Buyers had used bear propaganda until the early potato market was ruined. Early shipments went at 65 cents a bushel. The price paid at loading stations now is $1, still far too little to enable growers to even meet cost of production. Storage on the farm seems the only solution of the deplorable condition of both the potato and cabbage markets.

Grange Stock Certificates.—The banks have been notified that stock certificates of the new Grange-League-Federation Exchange have been delayed by the printers. Farmers are urged to deposit their money and take a receipt, getting the certificates later. The Exchange has been established but two months and expects about 75,000 farmer members. It has a new elevator feed mill in Buffalo, with a capacity of 400,000 bushels, and is establishing connections with farmer-owned elevators of the West, so as to minimize the expense of feeds.

Pedigreed Poultry.—In order to improve the egg-laying value of the flocks of the state the poultry department of the State College is offering April hatched S. C. White Leghorn cockerels from high line trap-nested stock at nominal prices to state poultry owners. Among the hens are some that have produced records of long period production. Five have laid over 1000 eggs each in 8 or 9 years. Many have laid over 200 in one year. The college has been doing fine work in certifying the layers of flocks of the state, and the use of these cockerels with such flocks is urged.

Farmers and Politics.—Farmers of New York mostly see very clear cut issues as election nears. A change of administration is badly needed. The farmers know that the present state administration has failed in its promises to agriculture. The latter has recognized what might be the farmer attitude and has been wily enough to put up a farmer as cadnidate for Lieutenant Governor, in hope of catching the farmer vote.

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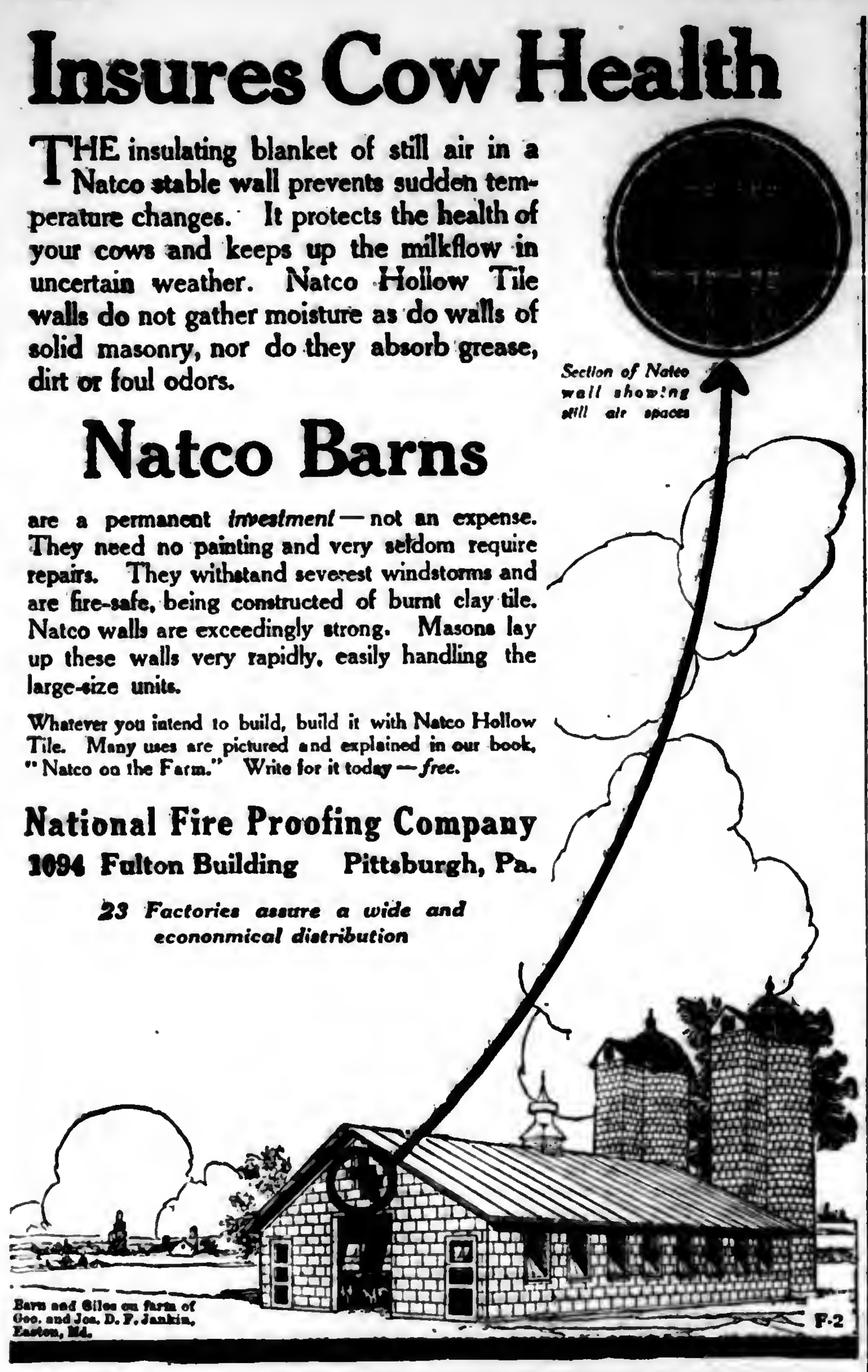

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National Dairy Show

"The Milky Way" had nothing on the National Dairy Show held at Chicago last week. From cows to the milk drinks served at the milk bar, it was a wonderful exposition, with the extensive machinery and commercial exhibits leading everything from standpoint of numbers adn artistry.

Even lots of farm folks who had never been at a dairy show, were amazed at the mass of machinery necessary to get the product from their cows to the producer in his various forms. All the processes in making butter, condensed milk, ice cream, cheese, powdered milk and other by-products of the cow were outlined if one had time to study the various complicated machinery on exhibition.

Certainly looking over the various commercial exhibits one would not suppose that the dairy industry was going thru a crisis at the present time that means its life or death. The separator men, the milking machine men, the manufacturers of bottling and condensing equipment, the butter manufacturers, the ice cream manufacturers, the barn equipment manufacturers, and all the other inventors, originators and producers of equipment, machinery and supplies for the dairy, creamery, condensary and ice cream plant looked prosperous.

It was not until one visited the cattle barns and sat at the ringside of the Holstein consignment sale that one realized that all was not well within the ranks of the farm folks who produce the milk so necessary to the well being not only of the commercial men who care for it after it leaves the cow, but also to the boys and girls and men and women of America.

In the first place the number of cattle on exhibition did not seem to be up to former years, and also the representative dairymen of no state, with the possible exception of Wisconsin and Iowa, were represented. Ohio had only 67 animals in the ring, and these were divided among the breeds as follows: Guernsey, 14 head; Brown Swiss, 44 head, and Jersey, 9 head. No Ohio Holsteins nor Ayrshires were entered in the cattle exhibits, altho W. G. Simons of Youngstown, did have a large consignment in the Holstein sale held Wednesday, Thursday and Friday of last week.

Prices that the animals brought their owners at this sale were disappointing to many of them, animals with exceptional breeding going at the utmost of deflated prices. More than one breeder was heard to say that he believed the best way to dispose of cattle was by private treaty, of course, there being the reservation attached to this that one has to have a mighty good reputation before he can make successful sales by this method, there being a big advertising value in the public sale.

The Grand Champions

Longview Farms of Lee's Summit, Missouri, were the outstanding exhibitors in the Jersey classes, capturing both grand championships, the grand champion bull being Fashionable Fern's Lad, and the grand champion cow being Sly Puss. Longview Farms also owned the junior champion bull, Wolff's Chieftain 2d. The state herd contest in the Jersey cattle class was called off because of the lack of entries.

Imperial Itchen May King, owned by F. E. Fox & G. Kingston & Son of Waukesha, Wis., was acclaimed the grand champion bull of the Guernsey breed. The grand champion cow was also from Waukesha, being owned by Jones & McKerrow. Iowa acptured the state championship in this breed with Wisconsin second.

Waukesha breeders also captured both championships in the Holstein classes, the banner for the grand champion cow going to Aitken Bros., on Doetie Nellie Concordia and for the grand champion bull to Baird Bros. on Cedar Lawn Canary Paul. Wisconsin won first in the state herd contest of the Holstein breed, Lillian Russell, the famous theatrical beauty, tying the ribbons in this class. Minnesota was second, Kansas third, Illinois fourth and Indiana fifth.

The most regrettable feature of the whole Holstein show from an Ohio standpoint was the absolute lack or of entries from this state. Not one Ohio animal was shown in the Holstein classes; the only Ohioan being connected with the Holstein contests was Peter Small of Chesterland, Ohio, who acted in a judging capacity. Howard C. Barker, the Ohio Holstein Ass'n. secretary, promised that next year Ohio breeders would be out in full force as they did not have the time to prepare for the show this year. It certainly did seem strange not to see Ohio represented at least with the other great Holstein states in the state herd contest.

The Ayrshire breeders staged a nice show, altho the judge did have trouble convincing the ringside that his placings were the right ones. The grand champion bull in this breed was Morton Mains Lord Barrylyndon Imperial, owned by the Alto Crest Farms of Massachusetts. The placing of the grand champion female was delayed until the last event of the show, too late to include in this issue. However, here again the Buckeye state did not have a chance as there was not a single entrant from Ohio.

WHAT OF THE FUTURE?

An excellent chance was given the visitor to the dairy show to study the relations of the different branches of the dairy business to each other and to estimate the effect of the present conditions upon the industry together with the effects of the foreign competition forecast by exhibits of Danish and Argentine products.

At present the situation is briefly that the majority of the condensaries are closed, thus necessitating the diverting of their supply of milk into other channels of trade. This condition should not have such a marked effect, as it is seeming to have, because figures from the National Dairy Council show that only 5 1-3 per cent of the milk produced in the United States goes into condensed milk.

The dealers are using this as a means to try to batter down the producers' organization, reduce his prices and generally demoralize the trade. The producers, especially in the Dairymen's League territory, are taking this opportunity to strengthen their organization and have the support of the majority of the farm press behind them.

There are several ways in which this situation can be improved. The most important of these is to increase domestic consumption and then increase foreign consumption in our competitors' countries. On examination of figures displayed by the U. S. Department of Agriculture at the dairy show in Chicago we find that the United States stands sixth among the leading countries in per capita consumption of milk, eighth in consumption of cheese and fourth in consumption of butter. There is certainly big room for improvement here and the National and State Dairy Councils are doing their utmost to bring before the people of the United States the value and the necessity of dairy products.

The National Dairy Show in its appeal to the city people ought to have a big effect in this movement because there were really more city people in attendance than cattle breeders, the show being given royal support by the Chicago press.

We find also that countries that export dairy products to this country to any extent do not have even the per capita consumption that this country has with the exception of Denmark. Here it would seem as if a little missionary work on the part of the National Diary Council might help these people to eat their own products and save the American market for the American producer.

Both Denmark and Argentina had extensive exhibits of their dairy products on display. At the Danish booth dainty, white-garbed maidens invited the visitors to sample their butter while at the Argentine bootn a number of varieties of cheese were on display. The importance of this foreign competition is seen from the following figures from the U. S. Department of Agriculture relative to the imports of butter from the following countries:

Denmark	13,725,434 lb.
Holland	3,007,553 lb.
Canada	6,817,854 lb.
Argentina	1,679,718 lb.

Another way in which American farmers can help increase their profits is by increasing the profit per cow. The National Dairy Council figures show that the yield per cow in this country is seventh among the leading nations. A large part of the Department of Agriculture's educational exhibits was to remedy this point.

The feature of the educational exhibits was the display of the work of a Wisconsin cow-testing association, the experts contending that one can not tell from looking at a cow how much profit she is going to return at the end of the year. In order to be able to tell whether a cow is worth her keep, the government experts advise all dairymen to become associated with a cow-testing association or keep their own records.

THE EFFECT OF MONEY

Along with the various efforts to increase production per cow and consumption per capita, it might be mentioned that one of the most important factors in farming operations in the past year has been the tightness of money. It has seemed as if every other business in the country could get money but the farmers. Because they could not get money, they had to sell their products at a loss because they could not market them profitably.

Part of this has been the fault of the farmer who does not get acquainted with his banker, while part has been the fault of the banker who does not acquaint himself with the farmers' problems. Other factors have been the government financial policies as explained in the Washington Letter this week.

How one bank helped its community and helped itself in so doing was the idea brough out by the display of the Grove City National Bank of Grove City, Pa. When this bank began its work in 1914 there were but five purebred animals in the county. There were no farm organizations worth mentioning and the bank deposits were $714,152.88. At this same time the other Grove City bank had deposits of $1,065,316.99.

Today Grove City, Pa., has 2,692 purebreds, 43 members of cow-testing associations, 96 members of bull associations, 187 members of breed organizations, 698 members of the Grove City Creamery Patrons' Ass'n., 95 members of a dairy cattle sales and show organization, 83 members of a young farmers' club, 30 farmer members in the Grove City Commercial Club, 1,100 purebred cows, 232 purebred bulls, 1,360 purebred heifers, 4,513 tuberculin tested animals, and 176 accredited herds. During this same time the deposits in the Grove City National Bank have advanced to $1,683,000, while the other banking institution in the city has increased to $4,608,000.

The community has a cattle show every fall that is second to none in Pennsylvania, and in order to co-operate with the movement the commercial club has bought a 239-acre park on the edge of the town and has alloted enough land to the community to build a big sales and show pavillion. This Grove City plan of community development has become the classic illustration of the country, being the subject of a great deal of literature put out by the department of agriculture.

In addition to securing proper recognition of the farmers' financial problems thru the bank's agricultural policy such a plan of action reacts to the ultimate benefit of the state and community, by improving the livestock, the standard of living and the community spirit.—W. H. L.

NEW YORK DAIRY NOTES

The New York State Holstein Breeders' Association offers $350 for the best Holstein exhibit by a county association at the big January sale in Rochester. Health guarantees for animals in this sale, will be on a new high basis. Each animal will have passed two tuberculin tests and will be sold on a 60-day retest guarantee. The State Club will develop the accredited herd plan which is advancing very rapidly. A Cortland County breeder who has been traveling in 14 states all summer, buying choice animals for export says New York has as good stock as any state, but its health guarantees have not been so good.

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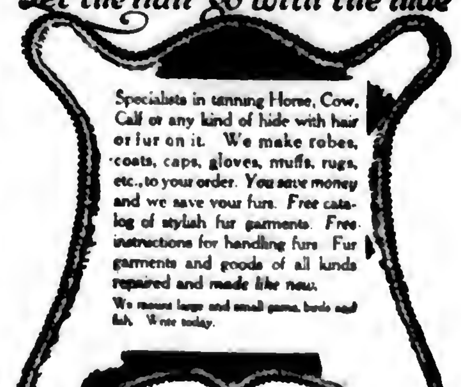

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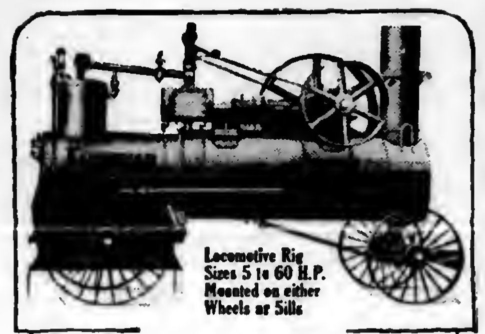

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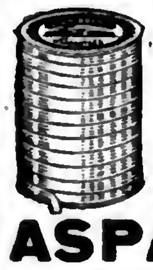

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HORTICULTURE

STARTING A HILLSIDE ORCHARD

In spite of the present apparent oversupply of fruit, we still find some who are considering entering the lists of fruit-growers as illustrated by the following query:

I have recently purchased 30 acres of Chester loam soil, located on the south side of a small mountain. The land is located only one mile from a large city having an unfailing demand for fruit. I am thinking of planting peaches and apples in the spring.

The land has not been farmed for 20 years and is grown up in grass and weeds, nearly approaching a virgin soil. It is rather steep to use a plow regularly. Could I grow peaches and apples by the sod mulch system using only alsike clover and a mowing machine? Would mice destroy the trees or could I could them by digging around the trees. I can readily obtain manure if needed. Concord grapes today are selling to the stores from the car at 8c a pound, 1 mile from this land. There are some stone fences around the plot. How about Concords on them? G. E. S., Lehigh County, Pa.

Considering this question from the viewpoint of the economic handling of the orchard, we doubt the advisability of planting any area to fruit trees for commercial purposes, which is too steep to plow at least occasionally. It can be done, of course, and there are even some arguments in favor of such a site, but when we consider the spraying and hauling of the fruit, and the difficulty of using a tractor, for example, we doubt the wisdom of such a use for the field.

If there is no better use available for the area, however, we consider that its use for an orchard is entirely feasible, and the net returns in a normal year may well be fairly good, notwithstanding the evident handicaps.

If used for both peaches and apples, probably the best way to do is to plant both kinds of fruit so far as possible on contour lines, or lines of practically equal elevation, regardless of their straightness, and then plan to do at least some cultivation over at least one side of the roots of the peach trees each year, and the same treatment will not hurt the apples. I have seen one very good orchard developed on this plan.

The apple trees of course can be developed from the start, either with or without cultivation, and this is especially easy where plenty of manure is available. Alsike and alfalfa mixed should give one plenty of mulch for several years at least while the trees are young. The peach trees can also be developed at least fairly well under this system. The mice can be discouraged considerably simply by mounding the trees up with fresh dirt, to a height of six or eight inches. Or they can be kept out entirely by the use of a little sheet of heavy galvanized wire cloth, made with about three meshes to the inch, and cut so as to make a loose-fitting collar around the base of the tree to a height of about eighteen inches.

In the case of the grapes, I would much prefer training them on regular trellises, on account of greater accessibility in spraying and picking, and less difficulty in keeping the fruit from molestation. The stone fences, can be utilized for this purpose, if desired, but I would not guarantee results.—J. P. Stewart.

Secretary of Agriculture Rasmussen Addresses the Farmers at Grove City Cattle Show

INFERTILE PLUM TREES

J. P. Stewart

The following letter indicates a very common experience with plum trees, especially when a miscellaneous lot of varieties are chosen.

Nine years ago I planted one dozen plum trees. Three of them started to bear fruit four years ago, the others have been blooming but bear no fruit. What can I do?

Will nitrate of soda and acid phosphate do any good and when should it be applied? Please let me know through your paper and oblige. P. K., Bucks Co., Pa.

The sterility of plums has been noted and studied by various pomologists for the last 40 years or more. Dorsey of Minnesota is one of the latest entrants into this enterprise, and after several years of study he concludes that the weather and the peculiarities of the varieties concerned are the chief causes of unfruitfulness in the plum.

The present writer does not state whether all of his trees are of the same variety or not, hence we can not guess whether the trouble is in the variety or possibly in the soil. If they are of the same variety and the soil and the elevation of the trees is about the same, the next guess would be in the matter of nutrition, as this is known to exercise a very great influence on bearing in many cases. In Oregon for example, a single application of nitrate of soda, about three or four weeks before blooming, increased the yield of apples from one or two boxes to the tree on the unfertilized trees to nine boxes on the trees receiving the nitrate, while all other conditions were kept as nearly the same as possible.

If it is a matter of nutrition in the present case, probably the best course for the owner to follow would be to apply about two pounds of nitrate of soda to the tree at the time indicated above, next spring, and then repeat this dose about the first to the fifteenth of July, for the benefit of the fruit buds for the following year. As to whether the latter is the latest or the most effective date, we are unable to state definitely, because this point has not been systematically studied as yet. We may simply refer in this connection to an experience of our own last year in the case of apples and peaches. The trees in question were evidently lacking in nutrition and hence a shipment of nitrate was ordered but it did not arrive until the very last of July. In spite of the advice of our friends we made the application anyway and took a chance on what would come of it.

In was in this orchard recently and I do not recall having ever seen Stayman Winesap apple trees as heavily loaded with fruit as those particular trees were. I was also told that the other varieties treated, including the peaches, had responded almost as well. This experience unfortunately was not as fully checked by the omission of the treatment on certain trees as would be desirable in order to be certain that it was the fertilization that was responsible, but judging from the previous behavior of the trees involved, we think there is very little doubt of this being the case.

SWEET POTATO STORAGE HOUSE MANAGEMENT

By Dr. T. F. Manus, Delaware

Four years study of sweet potato storage house management in Delaware show that moisture, ventilation, and temperature are each very important factors in the keep of sweet potatoes. In proper storage more than twelve per cent of the weight of potatoes is lost as moisture during the first three months of storage. This moisture in a large three floor commercial house under proper management was given off as follows: The first month 7.43 per cent of the weight of the potatoes was given off. The second month 5.33 per cent was given off. The first two weeks of the third month 1.9 per cent was given off.

This possibility of early removal of moisture should be taken advantage of in early fall during warm days and drying winds, when all the doors, windows and ventilators may be left open much of the time; very little heat from stoves is necessary and a saving in coal results. The one great value of heat aside from the prevention of frost and chilling is the rapid removal of moisture. Any management of the house in early storage that results in removal of the moisture effects a large saving in coal later in storage, and also possible loss from rots. Hence thoro drying during the filling goes far towards carrying the potatoes thru critical periods of weather in winter

The following precautions in construction and management should be carried out:

1. All bids should have removable false floors, three to four inches above the floor.

2. A three or four-inch air space should be provided between the bins, and at least a twelve-inch air space between the outside wall and the bin.

3. Sufficient basement and top ventilators should be provided to

change the air in the house between fifty and one hundred times a day in early storage. This will require on an average from one to two basement ventilators at each stove from 8x8 to 12x12 inches, this depending on the size of the house. The roof ventilators should vary from a small air shaft to a continuous cupola, depending on the size of the house.

4. Fill every other bin on lower floor first, thus giving better advantage for drying out.

5. Put the dryest and best stock on the first floor.

6. Commence second floor next, filling every other bin, placing the poorest stock on the third floor, where it will be marketed first.

7. During early storage open all doors, windows, and ventilators whenever weather permits. A temperature above 70 degrees may be maintained in the house for three weeks.

8. The temperature and humidity in later storage should not exceed 55 degrees and 60 per cent respectively.

The construction of the usual smaller type of sweet potato storage house does not permit of adequate ventilation, especially during the early part of the season. Many such houses have no top ventilation whatever; some have only small lattice ventilation at either end of the house, none on top; many have no side windows, having only one or two windows or doors at either end. These are frequently not kept open during the splendid drying days of early fall. In many such houses the potatoes are stored directly against the side walls; on first floor no false floors are provided, resulting in poor drying out and often in chilling and freezing in severe weather. The results are that when cold weather of late fall comes on the potatoes have not lost one-third of the amount of moisture required for proper storage, that is they have not gone thru the so-called kiln-drying process.

The moisture given off in the first three months from an efficient storage will vary from 10 per cent to 16 per cent of the weight of the sweet potatoes stored. Probably 12 per cent would be a safe amount to prevent rot. This means that for each one thousand (five-eighths) baskets stored, 3360 pounds of moisture must be removed in ninety days.

Under Delaware conditions one-half of this amount may easily be removed the first month of storage by taking advantage of natural ventilation, thus leaving one-half of 3360 pounds or 1680 pounds to be removed in the next sixty days, or about 28 pounds a day. Under average storage conditions from December 1 to February 1 it requires a movement of 5,000 cubic feet of air passed thru the storage house to carry out a pound of moisture, or 175,000 cubic feet to remove 35 pounds of moisture.

This presumes an average outside temperature of 45 degrees and an average outdoor humidity of 50 per cent with an indoor temperature of 55 degrees and an average humidity of 60 per cent. That is, each cubic foot of air entering the house would contain 2.4 grains of moisture and each cubic foot when leaving the house would contain 3.9 grains of moisture, or it requires practically 5,000 cubic feet to remove one pound of moisture. A three-story house 40x60x20 feet and storing 30,000 baskets should have removed from storage during December and January approximately 1,000 pounds of moisture a day. The contents of such a house is 48,000 cubic feet and 30,000 basket occupy 15,000 cubic feet, leaving air space of about 33,000 cubic feet, or each change of air will remove approximately 6.5 pounds of moisture. Then in order to remove 1000 pounds of moisture the air should be changed about 150 times every day. From the above figures one may readily see that overcrowded houses will be difficult to ventilate adequately. At least two cubic feet of space should be allowed for each bushel of sweet potatoes stored.

KEEPING WINTER SQUASHES

Many farmsrs are at a loss to know how some are successful in keeping their squashes in good condition, until late in the spring, while they lose most of theirs before the end of February; they usually attribute their want of success to causes beyond their control, when a careful investigation would show that mismanagement was the principal cause. Squashes to keep well must, first be well ripened; second, they should be gathered before heavy frosts come; third, should be well dried; fourth, the shell should be well glazed over, and while it need not be thick it should be hard; fifth, they should be kept where the temperature is very even, never very cold, or very hot; sixth, in handling, great care should be taken not to bruise them; this is of the highest importance.

Many farmers leave their squashes out until the frost kills the vines; the squashes are thus left exposed to the cold winds, and they are frequently left until it is cold enough to freeze water, and change the color of the tops of the squashes; this is fatal to their good keeping. Others, when they find that cold weather has come, hurry them in just as night sets in, and in their haste to get them under cover, they load them into the wagon as though they were stones; thus bruising nine out of every ten to a degree that causes them to rot by Thanksgiving time. Squashes are often stored in the barn, in one heap, until they get chilled, when they are carried into a warm, damp cellar, where they soon rot, and the owner is at a loss to know the reason. When stored in heaps, if the storehouse be dry, the under squashes will send out moisture in such quantities as to keep the whole heap surrounded by moisture. Squashes to keep well, should not only be kept in a dry atmosphere with a very even temperature, but they should be spread on the floor, or on shelves, so that the air can easily pass between them.—C. A. Umoselle, Atlantic Co., N. J.

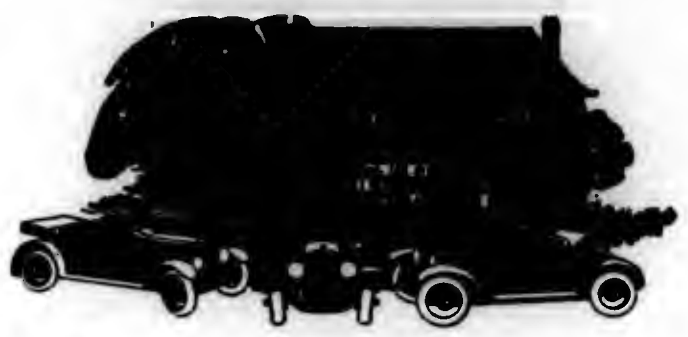
CONTAINERS ENOUGH FOR NEEDS

Apple growers in many sections of Pennsylvania have been up against a difficult situation during the past several weeks, in securing the necessary barrels, hampers and baskets in which to pack their crops for shipment.

The Bureau of Markets, Pennsylvania Department of Agriculture, in an effort to relieve this condition, conducted extensive inquiries among the manufacturers of the state and country, inquiries being made of no less than 125 manufacturing concerns.

All apple and other fruit growers in need of barrels, hampers and baskets for storing and shipping their products may secure a list of the firms having such containers ready for immediate shipment, by writing Bureau of Markets, Pennsylvania Department of Agriculture, Harrisburg

WEAVER
PIANOS



WHEREVER art and music are appreciated, wherever music holds sway, there you will find the Weaver interpreting in pure flawless tones the sublime thoughts of the masters and the quaint folk songs of the everyday people.

It has been fifty years since the Weaver craftsmen built their first instrument. And from that day to this the Weaver has held an enviable position in the music world.

Great artists, professional musicians and music lovers from all over the world have shown preference for the Weaver. Its full, clear, delicately responsive, yet powerful tone is what recommends it. And its encasements are as beautiful as its mechanism is perfect.

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For catalog and information, address: S. R. ZUG, Secretary, Lampeter, Pa.

A Chapter on Sweaters

A Side-Buttoning Style

This trim sweater buttons on both sides. It may be reversed readily, and the V-neck affords better protection than a square neck does. There is something "smart" about the buttoned sides that appeals to the girls.

First, chain 50 stitches, then work into each of these a single crochet stitch. For the next 80 rows single crochet into each under row, chaining one to turn at the end of each row.

Then for 24 rows work as above, but only for 24 stitches of one side of the garment. Then work in the same manner for 24 rows of single crochet on the opposite side of the sweater. These strips form the V-neck and the wing effects on the shoulders. The shoulders should now be fastened together with 2 chain stitches. It is well to tie the yarn fast on each inner edge where it is begun and finished in fastening the shoulder portions into a V. This will insure its not ravelling out. All beginnings and finishings should be well fastened, and any ends of yarn darned back and forth thru the body of the garment.

The opposite side of the sweater is made just like this side except that the stitches run down instead of up. This is not noticeable as the backward and forward working of the single crochet stitches leaves a perfectly finished ribbed appearance.

Now for the border. Work all around the sweater for two row in single crochet stitch, do not turn and go back on the same side as for the body of the sweater, but go around each row in the same direction. This way one gets a different looking crochet stitch, altho the work has all been of single crochet taken thru the entire stitch, not thru the back or the forward stitch alone.

After the first two rows of the border are completed the buttonholes are begun in the third row. In putting on the border I like to begin at the middle of one of the lower edges. In turning the corners of the border enough increasings should be made to keep the work flat and smooth looking.

When the border at one side has been worked up to the seventh row of single crochet stitches of the body portion, a chain of four stitches is made and fastened with a single crochet into the fifth stitch from where it was begun, thus skipping four stitches. The buttonholes, five on each side, are nine single crochet stitches apart. I would advise actual measurements in inches, because yarns vary, and measurement is, in such cases a better guide than counting stitches. Except in making the chains of four stitches for each of the five buttonholes, the rest of the third row is just like the rows underneath it. The fourth row is also a duplicate of the three preceding rows, except that where the chains of four are made, four single crochet stitches are made over the chain instead of thru the stitch underneath it.

The buttons of white pearl are sewed in place with some of the sweater yarn. A stout snap fastens the garment above each of the top buttons. A fuller figure than a slender girl would doubtless not need the snap, and maybe four buttons instead of five would be sufficient.

For a man's sweater it will be necessary to add about 12 more rows in width. I made such a sweater for my soldier brother, and he liked it especially because, no matter how hurriedly he put it on, either side was the right side, and fastened as easily one side out as the other.

A Home on a Missouri Farm

That Hopeless Sweater

I have crocheted wools all my life, and I have never discarded a scrap of yarn. I have often found that apparently non-usable bits come in handy.

A clever friend of mine made a nifty little sweater out of what was left of her husband's sweater after it had been used to extinguish the flames when a lamp exploded. The sweater was "fatally burned;" the sleeves had been worn thin at the elbows. My friend raveled out what was left of it, tied knots with two-inch ends wherever it was necessary, and worked them into the wrong side of the garment as she knitted, darning the ends down if needed.

A Chester Co., Pa., Gig—150 Years Old. Driver Dressed in Costume of That Time

The garment is of heavy gray wool trimmed with red, which was a leftover from another garment. The sweater is fastened down the front with the big white pearl buttons used on the old sweater. Had the sweater been crocheted instead of knitted, it would have been easier to work in and cover up the ends of the yarn where tied, and they would have strengthened the garment.

Spliced ends are, of course, best in either knitted or crochet work, but where the joining had to be so frequent as in this case, this would have been too laborious. To splice ends of yarn, pull two or three inches of the strands apart from each other, fluffing them up as much as possible, lap them, roll the lapped edge up and back between the palms of the hand until the two ends are well pressed together. This makes a very firm joining, and is absolutely unnoticeable.

Two women of my neighborhood made a good showing with discarded yarn recently. Their friends also helped them by giving them odd bits of yarn. With these remnants of yarn they made full-sized bed coverlets of 8-inch crocheted or knitted squares of all colors and kinds of yarn, doubling the thin yarn to make it of equal weight with the heavier. And we also made a coverlet a little smaller for an orphanage near us.

You can crochet better than you can knit? Well, do so then. I crocheted many sweaters, thumbless mitts, helmets, aviation caps and wash cloths during the war because I can crochet better than I can knit, and many of my friends said that their soldiers preferred them to the knit ones. Certain stitches are best for such crocheted articles.

Our men who have to work out in the cold appreciate these warm things to wear. And so do the children. I have just crocheted an aviation cap for my small nephew at his urgent request, and now he is asking for a helmet.—The Make-Over Lady.

A SENSIBLE CITY MOTHER

Last winter I took a course in diatetics, and in the same class was a doctor's wife who has six children. Her husband was with our army overseas during the war, and after the armistice was signed he was retained in the army medical service for a long time.

I admired the pluck of this little woman (she looked positively girlish). During our conversations she told me of her plans for this summer—how she wanted to take her six children out of the city the very week the oldest one would graduate from high school. They had secured an abandoned farm for the summer. I think the owner was glad to have them occupy the deserted house six or seven miles from town. It was money in his pocket to have some one on the place to look after the house and the fruit.

I made a mental note that I wanted to take an afternoon off during the summer and hunt up the family to see how her experiment was working. Consequently September 4, we motored twelve miles to find her. We went up a long lane, and there beneath the shade of many large trees was a house devoid of paint, but with doors and windows open and covered with mosquito netting.

My little friend greeted us, all smiles. Her skin was as brown as a nut, and her face was full of dimples. She had carried out her plans—no carpets to sweep, no tablecloths to be laundered, only a nice white oilcloth to eat off of. The children had gone barefoot and worn overalls all summer. They were healthy, happy, and getting wealthy, for even the smallest boy had picked up potatoes for a neighboring farmer and had made as high as $1.55 in a morning.

First, they called themselves the cherry grabbers, and harvested a big crop of cherries from the large old trees. All thru the season the mother had been canning the fruits in season—strawberries, cherries, raspberries, dewberries, huckelberries, peaches, grapes (cultivated and the wild and "chicken" grapes); all were free for the picking. What enviable stores of sunshine and good nature and products they had stored up for the winter.

The owner had placed on the farm for them to care for two horses, four or five cows, two of which had calves during the summer. They had all the milk they could use from the cows. There were several hogs in the orchard, and many more apples than could possibly be devoured, so the little woman was preparing to get the apples to the cider mill to start a supply of cider that would last her family for years.

The farmers round about considered the children a godsend, as they had worked out all during the season when it was next to impossible for the farmers to get any other help. All six had worked out. They received five cents a basket for picking up potatoes, and for picking tomatoes. The daughter (who will graduate from high school next year) donned overalls and worked out with the boys, yet her face was as fair as a wax doll's. She was wishing that she could tan or freckle. One day she ran to the house to show her mother a large freckle, but lo! it all washed off.

I was glad to see such fine children. Their living in the backwoods had not impaired their careful breeding and good manners. And really I envied that little mother her opportunity of spending the summer so far away from the sound and smell

of gasoline-gaited cars. We have a very pleasant home, but it is right beside a busy road where we get the noise and dust and smell of all kinds of automobiles from the elegant limousines of the millionaires going from other states to our coast resorts, to trucks of all kinds carrying produce and livestock to market.

We asked the little mother if she ever got lonesome. She said: "No, but we did get badly frightened when we first came out here. The very first night we were awakened by a sort of tramp, tramp, tramp, as if some one were walking in the third story. While we listened there came an unearthly screech as if a woman were being murdered!"

Then she paused to let us get the full effect of the thrill, after which she went on to say:

"But we soon learned to watch for that same tramp, tramp, tramp, and to even love the screech! Two screech owls had taken up their abode in our third story, and there they raised a very interesting family of four little screech owls, which furnished delightful entertainment from nearby trees when, at sunset and the day's work done, we swung in the hammocks beneath and watched the owlets' movies. And it has been there that we have had time and leisure to plan for the future."—Mrs. Cora June Sheppard, Cumberland Co., New Jersey.

Now that fall is here, the living room must replace the porch as a family gathering place. Wouldn't a little fresh paint, some bright cretonne, and the shifting about of pictures and furniture help to make it more cozy, livable and homelike? Have you the state college leaflet on the economics of good furnishings? Send to Ithaca for H-132.

An efficient housekeeper will use her head to save her heels, using judgment to prevent useless running back and forth.

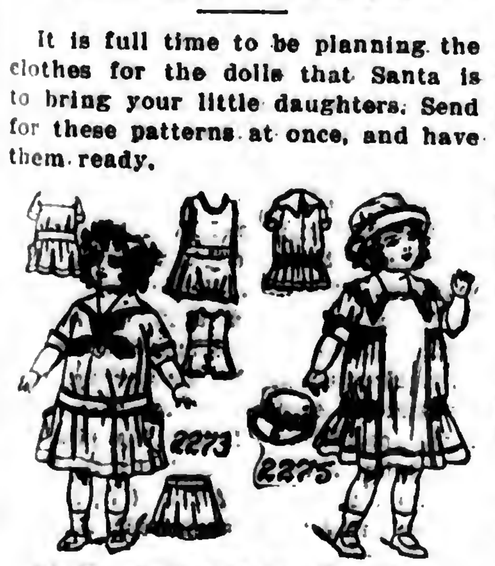
Tea, chocolate and cocoa stains are removed by soaking in cold borax water.

PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

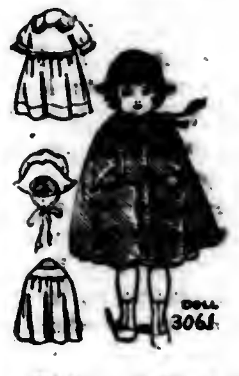
DOLL CLOTHES PATTERNS

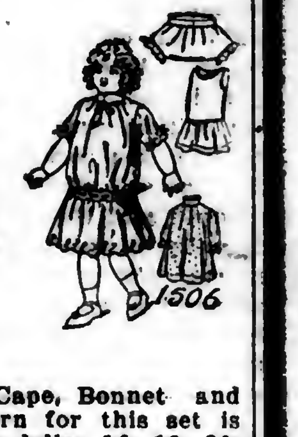
It is full time to be planning the clothes for the dolls that Santa is to bring your little daughters. Send for these patterns at once, and have them ready.



2273.—A Dainty Set For Dolly.—Here is a nice "one-piece" dress with a smart sailor collar and stylish pockets, a petticoat and combination undergarment, so that dolly may be dressed both up-to-date and comfortably. It will take just a few of mother's "pieces" to make this outfit. The pattern, which includes all the garments illustrated, is cut in 6 sizes: For dolls 16, 18, 20, 22, 24 and 26 inches in length. The dress requires 1¼ yard of 27-inch material, the petticoat ½ yard, and the combination ⅝ yard, for an 18-inch doll. Pattern, 10 cents.

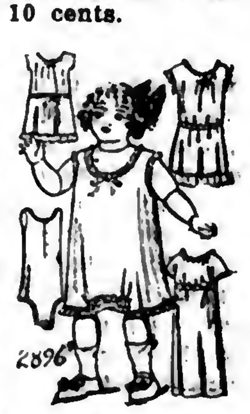
2275.—A New Dress and Hat for Miss Dolly.—Every doll's little mother will admire this design. The dress is pretty and easy to develop, and the hat is nice for all sorts of materials. The pattern for this attractive design is cut in 6 sizes: For dolls 16, 18, 20, 22, 24 and 26 inches in length. Size 24 will require 1½ yard of 27-inch material for the dress, and ⅝ yard for the hat. Pattern, 10 cents.

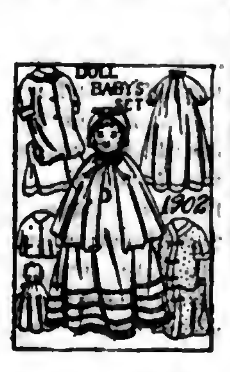




3061.—Dolly's Cape, Bonnet and Dress.—The pattern for this set is cut in 5 sizes, for dolls: 16, 18, 20, 22 and 24 inches long. Size 18 will require ⅝ yard of 36-inch material for the dress, ⅝ yard of 40-inch material for the cape, and ½ yard of 20-inch material for the bonnet. Pattern, 10 cents.

1506.—Doll's Short Clothes Set.—Comprises drawers, underskirt and a dress that may be finished in bishop or French style. The dress may be finished with feather stitching or lace, the free edges may be embroidered in scallops, with eyelets at neck edge and sleeve for ribbon insertions. The pattern comes in 6 sizes: For dolls 14, 16, 18, 20, 22 and 24 inches long. It will require ⅝ yard for the drawers, ⅞ yard for the petticoat, and 1 yard for the dress, of 36-inch material for a 24-inch size. Pattern, 10 cents.





2896.—Doll's Underwear. — The set includes pattern for envelope chemise, combination, a petticoat, night dress, waist and drawers. The pattern is cut in 6 sizes, for dolls—14, 16, 18, 20, 22 and 24 inches in height. It will require 2 yards of 36-inch material for a doll 24 inches long, for the entire set. Pattern, 10 cents.

1902.—Baby Doll Clothes Set.—There is no doll so dear to the heart of a doll's mother as one dressed in baby clothes. The designs here shown are easy to make as they are cut on simple, one-piece lines. The pattern is cut in 3 sizes, for dolls—16, 18 and 20 inches long. It will require 2⅛ yards of 27-inch material for the dress, 1⅞ yard of 24-inch material for the wrapper, and 2⅛ yards of 24-inch material for the coat for an 18-inch doll. Pattern, 10 cents.

Plain cheese-cloth dyed to harmonize with the room, and left unironed, is a good substitute for high-priced curtain materials.

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Price Reductions

James Barn Equipment

REDUCTIONS in prices of James Barn Equipment, averaging **20 per cent.** are now effective to and including November 25, 1920, for shipment prior to Februrary 1, 1921.

Following Are the Reasons On Which This Reduction is Based:

1—We are in whole hearted agreement with all those who believe that industry, as well as the general public, will be tremendously benefited if prices in all lines can be brought to a lower level.

2—There is, however, nothing in the present situation that justifies reduction of prices of any James Equipment.

Steel, malleable, fuel, power, all overhead items and labor cost as much as ever before.

Nor can we see any present evidence of reductions in wage rates, nor in cost of raw materials, during coming season.

3—To reduce James prices, we must, therefore, find some means of reducing manufacturing and selling costs through increased efficiency. We believe this increased efficiency can be brought about.

Prices Are Guaranteed Against Decline to date of Shipment

To do our part, we have reduced our prices for the period to and including November 15, to that level to which the public believes prices are to come. It is our hope that on November 15, these reduced prices may be continued.

Whether that will be possible depends on whether increased sales brought about by this reduction will be enough to materially reduce manufacturing and selling costs.

If the increased sales are not sufficient, it will be necessary to restore prices to the previous higher level.

James Manufacturing Company
Elmira, New York

"The Price of Milk"

By DR. CLYDE L. KING

THE First Book of Its Kind by the Country's Foremost Authority on Milk—Just From the Press—Contains Facts and Figures Never Before Gathered—Presented in a Clear-Cut, Scholarly Style—Touches Upon All the Factors Affecting the Dairy Business and Shows what Caused Low Prices and Also Tells How to Maintain Profitable Prices.

Dr. King's work for the State and National Government during the War gave him an exceptional opportunity to go farther into the economics of the Milk Market question than any man ever had before and his previous training as an Economist Enabled him to gather facts and make recommendations which are Fundamental in the business. The book is well illustrated by tables, graphs and figures which make it easily understood and interesting.

Every Dairyman Should Read This Book If He Would Understand His Own Business

Good Farmers realize that they must know the business side of farming to succeed. It is no longer enough that a Farmer be a good producer. He must also be a good market man. To be that he must know marketing laws and conditions. The book will inform him on that subject.

Get the Book and Read It at Once. The Edition is Limited

The following table of contents will give a suggestion as to what it contains. Every chapter is important and presents the subject clearly and forcibly.

Introductory Chapter 1. The Public Interest in the Price of Milk.

Part 1. The Price to the Producer. Chapter 2. The Forces That Fix the Price of Milk. 3. Manufactured Milk Products and the Price of Milk. 4. The Price Interdependence of Local Primary and International Markets. 5. The Cost of Production. 6. Shall Dairymen Organize for Collective Bargaining. 7. Policies of Dairymen's Organizations in Relation to Price.

Part 2. The Cost of Milk Production. 8. The Cost of Milk Distribution. 9. Sanitary Requirements in Their Relation to Price. 10. How Shall Milk be Distributed. 11. Can Milk Distribution Costs be Lowered. 12. The Public Interest in Milk Distribution.

Part 3. Fair Price Policies. 13. The Food Value of Wholesome Milk. 14. Co-operation and Price. 15. Fair Price Policies.

The book contains 336 pages, with 60 Charts. Maps and diagrams. Size 5 1 2x7 3.4 inches, richly bound in cloth with title in gold.

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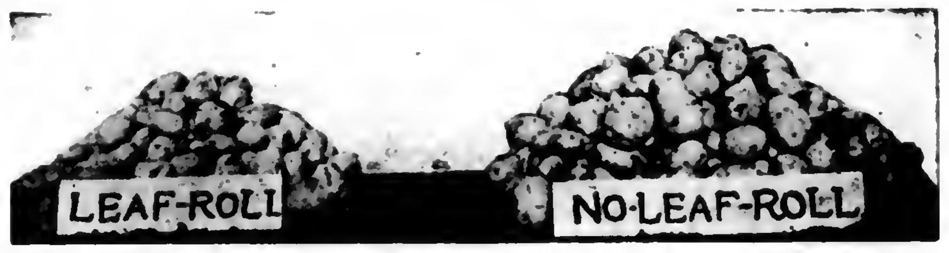
Dept. P. Franklin, Ind.

(Continued from Page 3)

One of the the most promising materials for the destruction of weeds by means of soil treatment is sulfur inoculated with suitable bacteria. Cranberry growers in South Jersey report satisfactory results from the use of sulfur for the destruction of bracken in cranberry bogs. Where sufficiently large amounts of sulfur are applied the soil gradually becomes very sour and barren of all vegetation. This condition may later be corrected by the use of lime. Such treatment has value, of course, not only for the eradication of weeds and undesirable plants, but also for the destruction of soil-infesting insects.

In the southern states much injury is caused by nematodes infesting the roots of many crops. Further north nematodes are less troublesome in the fields, but cause extensive injury in the greenhouse. Hence, the use of cyanide, formaldehyde, carbon bisulfide, sodium cyanide and sulfur is a more or less certain means for ridding the soil of these parasites.

Because of the large losses caused annually by weeds and soil infesting insects, the subject of control by means of sprays or soil treatment by chemicals should receive careful study.



Effects of Leaf Roll Upon Yield of Potatoes

EFFECTS OF POTATO LEAF ROLL

The potatoes shown in the illustration were grown on the farm of Mr. Edgar Rupp, Mechanicsburg, R. D. 4, Pa. Each pile of potatoes is the product of an equal number of hills, which in this particular case was 50. The 50 leaf roll hills produced a total of 35 lbs. of potatoes while the disease-free hills produced a total of 65 lbs. of the tubers, the same variety of seed being used in both cases—the Petoskey. While the yields of both are rather small, nevertheless the contrast is quite significant both as to total weights and as to size of the tubers respectively as you can readily notice from the photograph.

The diseased hills were staked during the early spring at the time of a field meeting for the purpose of having the growers recognize this disease from the growing vines, and now to show the contrast in yields. It is the intention to have these leaf-roll tubers saved until next year and then plant them in a portion of a row by themselves so as to give an object lesson to the people of this community on the fact that this is a seed-borne disease and as such is transmissable. — Paul L. Edinger, County Agent.

PENNSYLVANIA DAY AT STATE STATE COLLEGE NOV. 6TH

The annual celebration of Pennsylvania Day at the Pennsylvania State College, will fall this year on Saturday, November 6, and plans are already under way by students and college officials to make it the "best ever." In spite of the fact that over 1500 alumni were here for the recent Alumni Home Coming celebration, scores of graduates are expected to return for Pennsylvania Day, adding their share to the event. The Home Coming was such a great success that the alumni unanimously voted it an annual fall feature.

The largest crowd that ever attended a Pennsylvania Day celebration at Penn State is expected. The fraternities will hold house parties, and visiting parents and friends of the students will swell the attendance to thousands. The student cadet regimental review will be held in the morning, and a prominent speaker will address the college guests prior to the football game with the University of Nebraska. The college glee club will give its first concert in the evening.

MAPLE SYRUP PRODUCERS CO-OPERATE

The New York Grange-League-Federation Exchange is to buy supplies for all the maple syrup producers of the state. The State Federation of Farm Bureaus considers that the co-operative associations formed last spring by syrup and sugar producers of the state were among the most successful in the state.

One association saved $2500 in buying supplies for its members. Another saved $10,000 on the county's product.

The State College of Agriculture is co-operating with county organizations in an effort to secure reliable cost production records as a basis for next year's prices. Leading sugar bush owners have been asked to keep definite data on costs during the season, using a carefully prepared blank form arranged by the forestry department.

Thousands of maple syrup containers will be needed for next year's syrup. By securing these thru one agency a saving will be accomplished.

Cortland county producers, who were first to organize, are arranging to ship two carloads of syrup to a western farm bureau association to the advantage of both producers and buyers. These producers have a newly equipped bottling plant of their own.

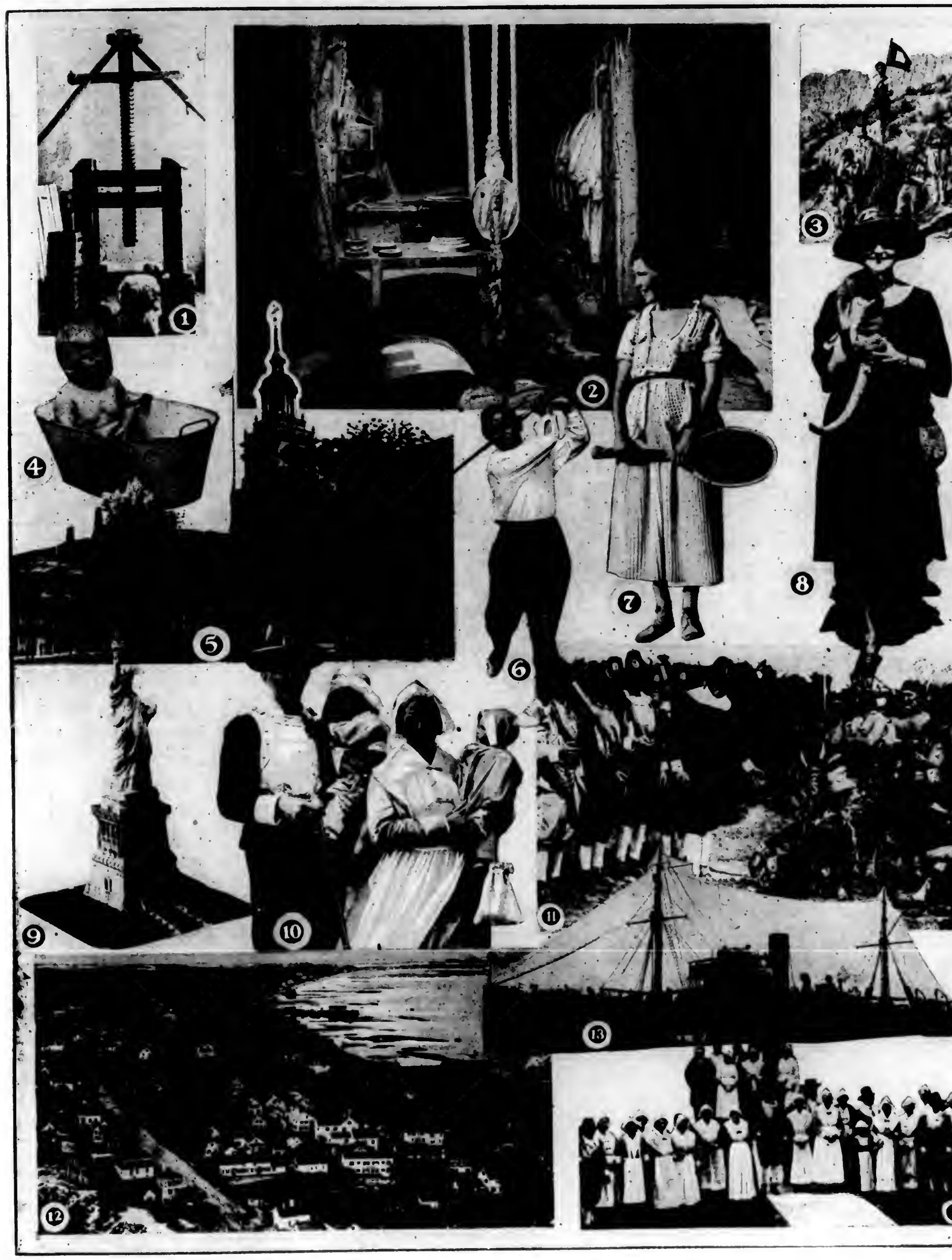
At a recent conference of producers of the state there was a strong sentiment in favor of federating the county syrup producers' associations into a state-wide organization.—Mabel G. Feint, New York.

MARYLAND AGRICULTURAL MEETING

The vital problems confronting the Maryland farmer, especially those associated with the marketing of farm products, will be given the place of prominence on the program of the annual meeting of the Maryland Agricultural Society at Salisbury, November 9 to 11.

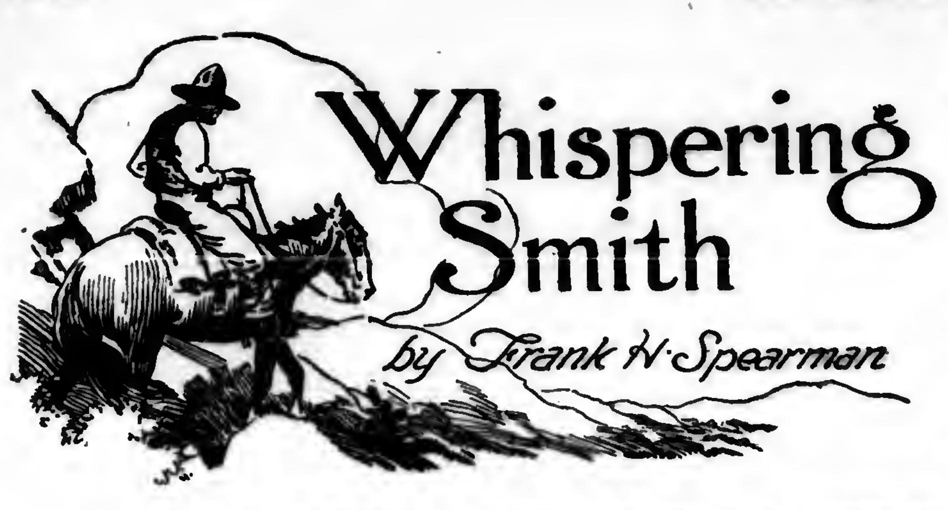
Wednesday morning, Nov. 10, will be devoted entirely to a discussion of marketing problems. This will be lead by a number of able speakers includin Dr. F. B. Bomberger, assistant director of the University of Maryland Extension Services; D. G. Harry, president of the Maryland State Dairymen's Association; G. H. Stevenson, manager of the Maryland Tobacco Growers' Association; J. E. Patten, president of the Maryland Tomato Growers' Association, and others.

PASSING EVENTS IN PICTURES



(Photos [illegible] by Underwood & Underwood.)

1—Cocoa press made of Native Wood used in Bolivia.
2—Old-fashioned Grist Mill run by windmill, Middletown, R. I.
3—Boy Scouts learn to Wig-wag in Bolivia.
4—Morning Dip.
5—Independence Hall where Declaration of Independence was signed, Phila., Pa.
6—Playing for the Professional Golfers' Championship.
7—Miss McCloud, Woman Tennis Champion of Canada.
8—Honey Bear as Pet is Fifth Avenue's latest style.
9—"Liberty Enlightening the World."
10—The Hopkins Family in the Pilgrim Pageant at Truro, Mass.
11—Governor Carver making treaty with Massosoit as depicted in the Pilgrim Pageant
12—Provincetown, Mass., as seen from Pilgrim Monument.
13—French cruised taking part in Pilgrim Tercentenary Celebration.
14—Group of players garbed as pilgrims.



Whispering Smith

by Frank H. Spearman

(Continued from Last Week)

CHAPTER XXXIX

Among the Coyotes

"You are Fatty Filber," he said to the thin chap. "Don't work your mouth like that at me; don't do it. You seem surprised. Really, have you the asthma? Get over it, because you are wanted in Pound County for horse-stealing. Why, hang it, Fatty, you're good for ten years, and of course, since you have reminded me of it, I'll see that you get it. And you, Baxter," said he to the man on the right. "I know I spoke to you once when I was inspector about altering brands; that's five years, you know. You," he added, scrutinizing the third man to scare him to death —"I think you were at Tower W. No? No matter; you two boys may go, any way. Fatty, you stay; we'll put some state cow on your ribs. By the way, are you a detective, Fatty? Aren't you? See here! I can get you into an association. For ten dollars, they give you a German-silver star, and teach the Japanese method of pulling, by correspondence. Or you might get an electric battery to handle your gun with. You can get pocket dynamos from the mail-order houses. Sure! Read the big book!"

When Gene and Bob Johnson rode into town, Whispering Smith was sitting in a chair outside the Blackbird, still chatting with Filber, who stood with his arms around a hitching-post, holding fast a mail-order house catalogue. A modest crowd of hangers-on had gathered.

"Here we are, Gene," exclaimed Smith to the deputy sheriff. "I was looking for steers but, some calves got into the drive. Take him away."

While the Johnsons were laughing, Smith walked into the Blackbird. He had lost thirty minutes, and in losing them had lost his quarry. Sinclair had disappeared, and Whispering Smith made a virtue of necessity by taking the upsetting of his plans with an unruffled face. There was but one thing more, indeed, to do, and that was to eat his supper and ride away. The street encounter had made so much talk in Oroville that Smith declined Gene Johnson's invitation to go back to the house. It seemed a convenient time to let any other ambitious rustlers make good if they were disposed to try, and Whispering Smith went for his supper to the hotel where the Williams Cache men made their headquarters.

There was a rise in the atmospheric pressure the moment he entered the hotel office door, and when he walked into the dining-room, some minutes later, the silence was oppressive. Smith looked for a seat. The only vacant place chanced to be at a table where nine men from the Cache sat busy with ham and eggs. It was a trifle awkward, but the only thing to do was to take the vacant chair.

The nine men were actively engaged with knives and forks and spoons when Whispering Smith drew out the empty chair at the head of the table; but nine pairs of hands dropped modestly under the table when he sat down. Coughing slightly to hide his embarrassment and to keep his right hand in touch with his necktie, Whispering Smith looked around the table with the restrained air of a man who has bowed his head and resolved to ask the blessing, but wants to make reasonably sure that the family is listening. A movement at the other tables, among the regular boarders of the hostelry, was apparent almost at once. Appetites began to fail all over the dining-room. Whispering Smith gave his order genially to the confused waitress:

"Bring me two eggs—one fried on one side and one on the other— and coffee."

There was a general scraping of chairs on the floor as they were pushed hack and guests not at the moment interested in the bill of fare started, modestly but firmly, to leave the dining-room. At Whispering Smiths' table there were no second calls for coffee. To stimulate the eating he turned the conversation into channels as reassuring as possible. Unfortunately for his endeavor, the man at the far end of the table reached for a toothpick. It seemed a pleasant way out of the difficulty, and when the run on toothpicks had once begun, all Whispering Smith's cordiality could not check it. Every man appeared to want a toothpick, and one after another of Whispering Smith's company deserted him. He was finally left alone with a physician known as "Doc," a forger and a bigamist from Denver. Smith tried to engage Doc in medical topics. The doctor was not alone frightened but tipsy, and when Smith went so far as to ask him, as a medical man, whether in his opinion the high water in the mountains had any direct connection with the prevalence of falling of the spone among old "residenters" in Williams Cache, the doctor felt of his head as if his brain were turning turtle.

When Whispering Smith raised his knife ostentatiously to bring out a feature of his theory, the doctor raised his knife higher to admit the force of it; and when Whispering Smith leaned his head forward impressively to drive home a point in his assertion, the doctor stretched his neck till his face grew apoplectic. Releasing him at length from the strain, Whispering Smith begged of the staring maid-servant the recipe for the biscuit. When she came back with it he sat all alone, pouring catsup over his griddle-cakes in an abstracted manner, and it so flurried her that she had to go out again to ask whether the gasoline went into the dough or under it.

He played out the play to the end, but when he rode away in the dusk his face was careworn. John Rebstock had told him why Sinclair dodged; there were others whom Sinclair wanted to meet first; and Whispering Smith was again heading on a long, hard ride, and after a man on a better horse, back to the Crawling Stone and Medicine Bend. "There's others he wants to see first or you'd have no trouble in talking business today. You nor no other man will ever get him alive." But Whispering Smith knew that.

"See that he doesn't get you alive, Rebstock," was his parting retort. "If he finds out Kennedy has got the Tower W money, the first thing he does will be to put the Doxology all over you."

CHAPTER XL

A Sympathetic Ear

When Whispering Smith rode after Sinclair, Crawling Stone Ranch, in common with the whole countryside, had but one interest in life, and that was to hear of the meeting. Riders across the mountain valleys met with but one question; mail-carriers brought nothing in their pouches of interest equal to the last word concerning Sinclair or his pursuer. It was commonly agreed through the mountains that it would be a difficult matter to overhaul any good man riding Sinclairs' steel-dust horses, but with Sinclair himself in the saddle, unless it pleased him to pull up, the chase was sure to be a stern one.

The morning had been cold, with a heavy wind and a dull sky. In the afternoon the clouds lowered over the valley and a misting rain set in. Dicksie had gone into Medicine Bend on the stage in the morning, and, after a stolen half-hour with McCloud at Marion's, had ridden home to escape the storm.

In the afternoon the rain, falling steadily, kept her in the house, and she sat in her room sewing until the light failed. She went downstairs. Puss had lighted the grate in the living-room, and Dicksie threw herself into a chair. The sound of hoofs aroused her and she went to a window. To her horror, she saw Sinclair walking with her cousin up to the front door. She ran into the dining-room, and the two men entered the hall and walked into the office. Choking with excitement, Dicksie ran through the kitchen and upstairs to master her agitation.

In the office Sinclair was sitting down before the hot stove with a tumbler of whiskey. "Lance"—he shook his head as he spoke hoarsely—"I want to say my friends have stood by me to a man, but there's none of them treated me squarer through thick and thin than you have. Well, I've had some bad luck. It can't be helped. Regards!"

He drank, and shook his wet hair again. Four days of hard riding had left no trace on his iron features. Wet to the bone, his eyes flashed with fire. He held the glassful of whiskey in a hand as steady as a spirit-level and tossed it down a throat as cool as dew.

"I want to say another thing, Lance: I had no more intention than a child of hurting Ed Banks, I warned Ed months ago to keep out of this fight, and I never knew he was in it till it was too late. But I'm hoping hoping he will pull through yet, if they don't kill him in the hospital to spite me. I never recognized the men at all till it was too late. Why, one of them used to work for me! A man with the whole railroad gang in these mountains after him has got to look out for himself or his life ain't worth a glass of beer. Thank you, Lance, not any more. I saw two men, with their rifles in their hands, looking for me. I hollered at them; but Lance, I'm rough and ready, as all my friends know, and I will let no man put a drop on me —that I will never do. Ed, before I ever recognized him, raised his rifle; that's the only reason I fired. Not so full, Lance, not so full, if you please. Well," he shook his black hair as he threw back his head, "here's to better luck in worse countries!" He paused as he swallowed, and set the tumbler down. "Lance, I'm saying good-by to the mountains."

"Your'e not going away for good, Murray?"

"I'm going away for good. What's the use? For two years these railroad cut-throats have been trying to put something on me; you know that. They've been trying to mix me up with that bridge-burning at Smoky Creek; Sugar Buttes, they had me there; Tower W—nothing would do but I was there, and they've got one of the men in jail down there now, Lance, trying to sweat enough perjury out of him to send me up. What show has a poor man got against the money there is in the country? I wouldn't be afraid of a jury of my own neighbors—the men that know me, Lance—any time. What show would I have with a packed jury in Medicine Bend? I could explain anything I've done to the satisfaction of any reasonable man. I'm human, Lance; that's all I say. I've been mistreated and I don't forget it. They've even turned my wife against me—as fine a woman as ever lived."

"There's good stuff in you yet, Murray."

"I'm going to say good-by to the mountains," Sinclair went on grimly, "but I'm going to Medicine Bend tonight and tell the man that has hounded me what I think of him before I leave. I'm going to give my wife a chance to do what is right and go with me. She's been poisoned against me—I know that; but if she does what's fair and square there'll be no trouble—no trouble at all. All I want, Lance, is a square deal. What?"

Dicksie with her pulses throbbing at fever-heat heard the words. She stood half-way down the stairs, trembling as she listened. Anger, hated, the spirit of vengeance, choked in her throat at the sinister words. She longed to stride into the room and confront the murderer and call down retribution on his head. She knew what he meant to do—to ride into Medicine Bend under cover of the storm, murder the two he hated, and escape in the night; and she resolved he should never succeed. Dickrie, lightly as a shadow, ran into the office and began ringing Medicine Bend on the telephone.

CHAPTER XLI

Dicksie's Ride

When Lance Dunning entered the room ten minutes later, Dicksie stood at the telephone; but the ten minutes of that interval had made quite another creature of his cousin. The wires were down and no one from any quarter gave a response to her frantic ringing. Through the receiver she could hear only the sweep of the rain and the harsh crackle of the wind. Sometimes praying, sometimes fainting, and sometimes despairing, she stood clinging to the instrument, ringing and pounding

upon it like one frenzied. Lance looked at her in amazement. "Dicksie, what's the matter?"

He called twice to her before she turned, and her words almost stunned him: "Why did you not detain Sinclair here tonight? Why did you not arrest him?"

Lance's sombrero raked heavily to one side of his face, and one end of his mustache running up much higher on the other did not begin to express his astonishment. "Arrest him? Arrest Sinclair? Dicksie, are you crazy? Why should I arrest Sinclair? Do you suppose I am going to mix up in a fight like this? Do you think I want to get killed? The level-headed man in this country, just at present, is the man who can keep out of trouble, and the man who succeeds, let me tell you, has got more than plenty to do."

When she spoke her tone was stinging. "You know that man is going to Medicine Bend to kill his wife!"

Lance took the cigar from his mouth and returned her look. "I know no such thing," he growled curtly.

"And to kill George McCloud, if he can."

He stared without reply.

"You heard him say so," persisted Dicksie vehemently.

Lance crossed his legs and threw back the brim of his hat. "McCloud is nobody's fool. He will look out for himself."

"These fiendish wires to Medicine Bend are down. Why hasn't this line been repaired?" she cried, wringing her hands. "There is no way to give warning to any one that he is coming, and you have let him go!"

Lance whirled in his chair. "Could I keep him from going?"

"You did not want to; you are keeping out of trouble. What do you care whom he kills tonight!"

"You've gone crazy, Dicksie. Your imagination has upset your reason. Whether he kills anybody to-night or not, it's too late now to make a row about it," exclaimed Lance, throwing his cigar angrily away. "He won't kill us."

"And you expect me to sit by and fold my hands while that wretch sheds more blood, do you?"

"It can't be helped."

"I say it can be helped! I can help it—I will help it—as you could have done if you wanted to. I will ride to Medicine Bend tonight and help it."

Lance jumped to his feet, with a string of oaths. "Well, this is the limit!" He pointed his finger at her. "Dicksie Dunning, you won't stir out of this house tonight."

Her face hardened. "How dare you speak in that way to me? Who are you, that you order me what to do, where to stay? Am I your cowboy, to be defiled with your curses?"

He looked at her in amazement. She was only eighteen; he would still her face down. "I'll tell you who I am. I'm master here, and you will do as I tell you. You will ride to Medicine Bend to-night, will you?" He struck the table with his clinched fist. "Do you hear me? I say not a horse shall leave this ranch in this storm tonight to go anywhere for anybody or with anybody!"

"Then I say to you this ranch is my ranch, and these horses are my horses! From this hour forth I will order them to go and come when and where I please!" She stepped toward him. "Hence-forward I am mistress here. Do you hear me? Henceforward I give orders in Crawling Stone House, and every one under this roof takes orders from me!"

"Dicksie, what do you mean? For God's sake, you're not going to try to ride—"

She swept from the room. What happened afterward she could never recall. Who got Jim for her or whether she got the horse up herself, what was said to her in low, kindly words of warning by the man at Jim's neck when she sprang into the saddle, who the man was, she could not have told. All she felt at last was that she was free and out under the black sky, with the rain beating her burning face and her horse leaping fearfully into the wind.

There was no need to urge Jim. He had the rein and Dicksie bent down to speak to him, as she often spoke when they were alone on the road, when Jim, bolting, almost threw her. Recovering instantly, she knew they were no longer alone. She rose alert in her seat. Her straining eyes could see, nothing. Was there a sound in the wind? She held her breath to listen, but before she could apprehend Jim leaped violently ahead. Dicksie screamed in an agony of terror. She knew then that she had passed another rider, and so close she might have touched him.

Fear froze her to the saddle; it lent wings to her horse. The speed became wild. Dicksie knit herself to her dumb companion and a prayer choked in her throat. She crouched lest a bullet tear her from her horse; but through the dkraness no bullet came, only the sleet, stinging her face, stiffening her gloves, freezing her hair, chilling her limbs, and weighting her like lead on her struggling horse. She knew not even Sinclair could overtake her now—that no living man could lay a hand on her bridle-rein—and she pulled Jim in down the winding hills to save him for the long flat. When they struck it they had but four miles to go.

Across the flat the wind drove in fury. Reflection, thought, and reason were beginning to leave her. She was crying to herself quietly as she used to cry when she lost herself, a mere child, riding among the hills. She was praying meaningless words. Snow purred softly on her cheeks. The cold was soothing her senses. Unable at last to keep her seat on the horse, she stopped him, slipped stiffly to the ground, and struggling through the wind as she held fast to the bridle and the horn, half walked and half ran to start the blood through her benumbed veins. She struggled until she could drag her mired feet no farther, and tried to draw herself back into the saddle. It was almost beyond her. She sobbed and screamed at her helplessness. At last she managed to climb flounderingly back into her seat, and, bending her stiffered arms to Jim's neck, she moaned and cried to him. When again she could hold her seat no longer, she fell to the horse's side, dragged herself along in the frozen slush, and, screaming with the pain of her freezing hands, drew herself up into the saddle.

She knew that she dare not venture this again—that if she did so she could never remount. She felt now that she should never live to reach Medicine Bend. She rode on and on and on—would it never end? She begged God to send a painless death to those she rode to save, and when the prayer passed her failing senses a new terror awakened her, for she found herself falling out of the saddle. With excruciating torment she recovered her poise. Reeling from side to side, she fought the stupor away. Her mind grew clearer and her tears had ceased. She prayed for a light. The word caught between her stiffened lips and she mumbled it till she could open them wide and scream it out. Then came a sound like the beating of great drums in her ears. It was the crash of Jim's hoofs on the river bridge, and she was in Medicine Bend.

A horse, galloping low and heavily, came through the snow from Fort Street into Boney, and, where it had so often stopped before, dashed up on the sidewalk in front of the little shop. The shock was too much for its unconscious rider, and, shot headlong from her saddle, Dicksie was flung bruised and senseless against Marion's door.

CHAPTER XLII

At the Door

She woke in a dream of hoofs beating at her brain. Distracted words fell from her lips, and when she opened her swollen eyes and saw those about her she could only scream.

Marion had called up the stable, but the stablemen could only tell her that Dicksie's horse, in terrible condition, had come in riderless. While Barnhardt, the railway surgeon, at the bedside administered restoratives, Marion talked with him of Dicksie's sudden and mysterious coming. Dicksie, lying in pain and quite conscious, heard all, but, unable to explain, moaned in her helplessness.

Sinclair had made good his word, and had come out of the storm with a summons upon Marion and it was the surgeon who threw open the door and saw Sinclair standing in the snow.

Sinclair, as he faced Barnhardt, was not easy in spite of his dogged self-control; and he was standing, much to his annoyance, in the glare of an arc-light that swung across the street in front of the shop. He was well aware that no such light had ever swung within a block of the shop before and in it he saw the hand of Whispering Smith. The light was unexpected, Barnhardt was a surprise, and even the falling snow, which protected him from being seen twenty feet away, angered him. He asked curtly who was ill, and without awaiting an answer asked for his wife.

The surgeon eyed him coldly. "Sinclair, what are you doing in Medicine Bend? Have you come to surrender yourself?"

"Surrender myself? Yes, I'm ready any time to surrender myself. Take me along yourself, Barnhardt, if you think I've done worse than any man would that has been hounded as I've been hounded. I want to see my wife."

"Sincalir, you can't see your wife."

"What's the matter—is she sick?"

"No, but you can't see her."

"Who says I can't see her?"

'I say so."

Sinclair swept the ice furiously from his beard and his right hand fell to his hip as he stepped back. "You've turned again me too, have you, you gray-haired wolf? Can't see her! Get out of that door."

The surgeon pointed his finger at the murderer. "No, I won't get out of this door. Shoot, you coward! Shoot an unarmed man. You will not live to get a hundred feet away. This place is watched for you; you could not have got within a hundred yards of it to-night except for this snow." Barnhardt pointed through the storm. "Sinclair, you will hang in the court-house square, and I will take the last beat of your pulse with these fingers, and when I pronounce you dead they will cut you down. You want to see your wife. You want to kill her. Don't lie; you want to kill her. You were heard to say as much to-night at the Dunning ranch. You were watched and tracked, and you are expected and looked for here. Your best friends have gone back on you. Ay, curse again and over again, but that will not put Ed Banks on his feet."

Sinclair stamped with frenzied oaths. "You're too hard on me," he cried, clenching his hands. "I say you're too hard. You've heard one side of it. Is that the way you put judgment on a man that's got no friends left because they start a new lie on him every day? Who is it that's watching me? Let them stand out like men in the open. If they want me, let them come like men and take me!"

"Sinclair, this storm gives you a chance to get away; take it. Bad as you are, there are men in Medicine Bend who knew you when you were a man. Don't stay here for some of them to sit on the jury that hangs you. If you can get away, get away. If I were your friend—and God knows whom you can call friend in Medicine Bend to-night—I couldn't say more. Get away before it is too late."

He was never again seen alive in Medicine Bend. They tracked him next day over every foot of ground he had covered. They found where he had left his spent horse and where afterward he had got the fresh one. They learned how he had eluded all the picketing planned for precisely such a contingency, got into the Wickiup, got upstairs and bust open the very door of McCloud's room. But Dicksie had on her side that night One greater than her invincible will or her faithful horse. McCloud was two hundred miles away.

Barnhardt lost no time in telephoning the Wickiup that Sinclair was in town, but within an hour, while the two women were still under the surgeon's protection, a knock at the cottage door gave them a second fright. Barnhardt answered the summons. He opened the door and, as the man outside paused to shake the snow off his hat, the surgeon caught him by the shoulder and dragged into the house Whispering Smith.

Picking the icicles from his hair, Smith listened to all that Barnardt said, his eyes roving meantime over everything within the room and mentally over many things outside it. He congratulated Barnhardt, and when Marion came into the room he apologized for the snow he had brought in. Dicksie heard his voice and cried out from the bedroom. They could not keep her away, and she ran out to catch his hands and plead with him not to go away. He tried to assure her that the danger was over; that guards were now outside and everywhere, and would be until moring. But Dicksie clung to him and would take no refusal.

Whispering Smith looked at her in amazement and in admiration. "You are captain to-night, Miss Dicksie. If you say the word I'll lie here on a rug till morning. But that man will not be back to-night. You are a queen. If I had a mountain girl that would do as much as that for me I would—"

"What would you do?" asked Marion.

"Say good-by to this accused country forever."

(Continued Next Week.)

Markets

PHILADELPHIA PRODUCE

—Oct. 25, 1920.

Altho the supply of potatoes on hand is not much larger than it was a week ago, at the same time it fully meets the demand, and prices have been showing an easier tendency during the past few days. Penn. and N. J. stock continues plentiful with a few from N. Y. and Eastern Shore. The N. J. long potatoes or Giants are selling around $2.25 cwt. in sks. Lehigh County potatoes are selling at $1.50@1.70 cwt., with potatoes from other Penna. sections at $1.75@2.10 cwt. N. Y. state round stock sold today at $1.65@$1.75 cwt. Eastern Shore potatoes shipped in barrels ranged from $2.25@3.25 bbl.

Sweet potatoes are meeting a dull market especially the Eastern Shore stock which is selling at $2.50@2.75 bbl. for primes with No. 2s at $1.15@1.25. N. J. primes range from 65@85c ⅝-bskt. with No. 2s at 25@40c.

Vegetables—With the season on nearby green beans nearly over, supplies are beginning to make their appearance from other sections. A few N. J. beans sold here this morning at $1@1.50 ⅝-bskt. Fancy bchd. beets are firm and active at 2@4c bunch, while the loose beets are meeting a fair demand at 75c@$1.25 hamper.

Brussel Sprouts from the L. I. section are bringing around 20c qt. when fancy but some of them are so poor they only command 10@12c. Carrots are weaker under increasing supplies from N. Y. There were two cars here this morning at $1.25@1.50 100-lb. sk. The N. J. grown carrots sold at 40@65c ⅝-bskt. N. Y. cabbage was somewhat firmer today selling at $10@14 ton for domestic with the Danish mostly at $20 ton. There was also some improvement in the cauliflower market, the L. I. stock selling at $1.75@2 crate and the western N. Y. at $1.25@1.50 crate.

Celery is firmer and a little higher, the N. Y. stock selling at 25@65c bch., and the Penna. small bches. at 5@15c bch. Good corn is getting scarce and prices are advancing, some selling here this morning at $1@1.50 ⅝-bskt. while the loose sold at $1@3.50 100 ears. Eggplants are firmer at 50@75c ⅝-bskt. Good lettuce is scarce and bringing high prices when fancy, some from N. J. selling here today at 75c@$3 box and some from N. Y. at $2@3 box.

Onions are very plentiful and easy at prices ranging from $1.15@1.60 100 lbs. sk. on yellows and $1.50@1.85 sk. for white onions. Parslay remains practically unchanged at 1@2c bch. Parsnips are plentiful and steady at 50@65c ⅝-bskt. Peppers show a wide range in quality and are selling from 20@50c ⅝-bskt. Pumpkins are plentiful and meeting a fair demand at $1.25@1.50 bbl.

Radishes show no change at 1½@2½c bch. Tomatoes are generally poor and selling mostly at 60c@$1.25 ⅝-bskt. with some fancy at $1.75@2 ⅝-bskt. Green tomatoes are doing better and bringing from 60@90c ⅝-bskt. Turnips are somewhat easier at 35@50c ⅝-bskt. for the white, with the Penna. grown yellows or rutabagas firm at 75c@$1 ⅝-bskt. A little watercress is coming and selling around 2@2½c bch.

Fruits—The market is abundantly supplied with apples. Strictly fancy fruit rules firm and active, but there are a large number of poor, common and ordinary apples which rule dull and draggy at low prices. There were some 25 or 30 cars offered this morning, sales being made about as follows: Grimes Golden, bbl. $3.50@6; Maiden Blush, $4.75@5.50; 20-Oounce, $2.25@4; Snows, $5@5.50; Kings, $4.25@5; Hubbardsons, $4@4.50; Alexander, $3@4; Smith Cider, $2.50@3.50; Rome Beauty, $5@6; Stayman Winesaps, $4@6; Jonathans, $5@6.50; York Strips, $4@4.25; Greenings, $4@5; Delicious, $7.50; Sutton Beauty, $5; Fall Pippins, $3.50; Wagner, $4; Culverts, $2.75;

Bu. bskts. ranged from 50c@$1.25 bu. and box apples brought from $2@3.50. A few apples are being shipped here in bulk and these are selling mostly at $1@1.25 cwt. Fancy pears are meeting an active market at about the following values: Bartletts, $2@3 bu. and $4.50@8 bbl.; Seckels, $1.75@3.50 bu. and $6@8 bbl.; Sheldons, $2.25@2.75 bu.; Anjous, $2.25@3 bu.; Lawrence, $1.50@2.25 bu.; Kieffers, 90c bu. and $3.50 bbl. There were four cars of N. Y. grapes here this morning which sold at $1.45@1.60 a 12-qt. bskt. for the Concords and $1.30@1.40 bskt. for the Niagaras.

Cranberries remain about steady at $2@3.25 crate. Quinces are in light supply and bringing $2@3 bu. Two cars of N. Y. peaches sold at $2.25@3 bu. Chestnuts are selling at 15@20c lb.

Poultry—The market is being well supplied with live poultry of all kinds and has been gradually easing off until at the present time the following prices are prevailing: Fowls heavy, 28@30c lb.; light to medium weight fowls, 22@23c; leghorn fowls, 20@22c lb.; spring chickens fancy, 30@32c; common to good spring chickens, 24@26c and leghorn spring chickens, 23@24c. Ducks are showing no change from last week's prices of 30@34c lb. A few geese are on the market and selling at around 30c lb.

Eggs—The market on eggs is ruling very firm with the demand active for strictly fancy eggs. At this writing Penna and other nearby current receipts are quotable at 66c doz. and firsts at 67@69c doz. Strictly fancy candled carefully graded and selected eggs are jobbing out at 78@79c doz. Western firsts are quotable at 62@65c doz. and western extra firsts at 67@69c and seconds at 52@57c.

LANCASTER PRODUCE

—Oct. 23, 1920.

The upward tendency of prices on farm products which presages the beginning of the fall season were in evidence at this morning's market. Despite a rather abundant supply of eggs on hand, as high as 85 cents a dozen was asked. Apples were plentiful at from $1.25 to $2 per bushel. Potatoes sold slightly higher than last week at the prevailing price of $1.25 bu. Tomatoes also were in abundance but with prices up to 15 and 20 cents a box. The quotations:

Butter and Eggs—Fresh eggs, 78@85c doz.; country butter, 70@75c lb.; creamery butter, 80c lb.; duck eggs, 70@80c doz.; goose eggs, 7@8c each.

Poultry—Dressed fowls, $2@2.25 ea.; broilers, $1@2 ea.; squabs, 50c@$1 ea.

Vegetables—Parsnips, 10c box; spinach, 15@20c ½-pk.; turnips, 40c ½-pk.; peppers, 2@3c ea.; cucumbers, 5c each; potatoes, 20c ¼-pk.; $1.25 bu.; sweet potatoes, 30@40c ½-pk.; cabbage, 5@10c hd.; cauliflower, 15@25c hd.; lima beans, 25@30c pt.; onions, 10c box, red beets, 5c bch.; beans, 30@40c ½-pk.; rhubarb, 3@5c bch.; tomatoes, 15@20c bx.; corn, 20@30c doz..

Fruits—Apples, 15@20c ½-pk.; $1.25@2 bu.; cantaloupes, 5@10 ea.; peaches, 10@15c qt. box., $1.75@2.25 bskt.; pears, 20@30c ½-pk.

BALTIMORE PRODUCE

—Oct. 23, 1920.

Potatoes—Quote: White, Md., Penna. and nearby, per 100 lbs., $1.50@2; Jerseys, 150-lb. sack, $2.75@3; Eastern Shore, McCormicks, 100 lbs., $1.50. Sweets—Yellow, No. 1, bbl., new, $3@3.25; do, Anne Arundel, bbl. $1@3.25; Eastern Shore Md. and Del., bbl., $3@3.25; native, bskt., 40c. Yams—Fancy, bright, bbl., $2.50@2.75.

PITTSBURGH PRODUCE

—Oct. 23, 1920.

Butter and Cheese—Prints, 63@63½c; tubs, 62½@63c; cooking, 53@54c; Ohio, 58½@59½c; cheese, New York full cream, 31@32c; Roquefort, $1@1.20; Wis. Swiss, 49@50c; do, 7-lb. brick, 31@32c; do, 5-lb. block, 33@34c; Phila. cream, doz., $1; Longhorns, 31@32c; Limburger, 1-lb., 33c; do, 2-lb., 32c.

Eggs—Fresh select, 68@70c; current receipts, 63@64c; candled storage, 56@57c; do at mark, 50@51c.

Produce—Potatoes, Mich. sack, $3.25@3.40; do bulk, per 100 lbs., $1.75@2; sweet potatoes, East Shore, bbl., $3.75@4; beans, wax and green, hamper $1.50@3.50; do lima, hamper, $4.50@4.75; onions, Spanish, crate, $1.75@2; do h. g., 100-lb. sack, $1.50@1.75; cabbage, h. g. bu., 75@85c; do bbl., $1.50@2; green corn, h. g. bushel, $2@2.50; cauliflower, crate, $2.50@2.75; lettuce, home grown, bskt., 40@50c; do head box, $2@2.50; turnips, bu., $1.50@2; garlic, lb. 25@30c; parsley, doz., 35@40c; radishes, doz., 25@50c; tomatoes, Ashtabula, h. h., bskt., $2@2.50; do h. g. bskt., $1.50@1.75; eggplant, Fla. hamper, $3@4; cucumbers, home grown, bu. $3.50@4; mushrooms, bskt., $1.50@2; carrots, bu., $1.25@1.75; celery, bunch, 25@75c; peppers, hamper, $1.25@1.50; do red, bu., $1.50@1.75.

NEW YORK PRODUCE

—Oct. 23, 1920.

Butter easy; receipts, 4399 tubs; creamery, higher than extras, 57½@58c; extra, 92 score, 56½@57c; first, 88 to 91 score, 44@45c; packing stock, current make, No. 1, 34c.

Eggs unsettled; receipts, 10,275 cases. Fresh-gathered extra firsts, 67@70c; do, firsts 63@66c; state, Penns. and nearby western hennery white, firsts to extras, 85c@$1; do, browns, extras, 75@85c; do, gathered browns and mixed colors, firsts to extras, 63@72c.

Cheese steadier; receipts, 1418 boxes; state, whole-milk flats, held, specials, 27@28c; do, average run, 24@26c; state, whole-milk flats, current make, specials, 24@25c; do average run, 23c; state, whole-milk twins, held, specials, 27@27½c; do, average run, 24@26c.

Vegetables—Potatoes, state, 180-lbs., $3.50@4.25; L. I., bbl. $4.25@4.50; Jy. 1s, bskt. $1@1.25; Jy. 2s, bskt., 50@90c; brussels sprouts, qt., 5@20c beans, bskt., 50c@$3.50; beets, bbl., $2@3; carrots, nearby, 100, $1.50@3; corn, Jy. 100, $2@3; celery, bch 15@65c; cabbages, L. I. bbl., 50c@1; Jy., bbl., 50c@$1.25 cauliflowers, nearby, crate, 50c@$1.50; eggplants, bskt. $1@1.50; lima beans, bskt., $2.50@4.25; oyster plant, 100 bchs., $6@8; onions, red, $1@1.60, yel. bag, $1@1.60; white, bag, $1@1.50; peppers, green, bbl., $1.50@2; red, bbl., $2.50@3.50; pumpkins, cheese, $1@1.50; yankee, 50c@$1; parsnips, bbl. or bag, $3; parsley, nearby, 100, $1@2; radishes, nearby, 100 bchs., $1@3; romaine, nearby, bbl., $1.50@2.50; spinach, nearby, bskt., 50c@$1.25, Hubbard, bbl., $1.50@2; turnips, white, 100 bchs., $2@3.50 rutabaga, bbl., $1@1.75 tomatoes, nearby, bush., box and bskt., $1@3.50.

Fruits—Apples, bskts., fancy, $1.25@1.50; average, 65c@$1; bbls., York Imp., $3@4.25; Baldwin, $2.50@4; Alexander, $2.50@4; 20-Ounce, $2.50@4; Wolf River, $3@6; Wealthy, $3@5; Greening, $1.50@4.50; McIntosh, $5@8; King, $3@5.50; pears, bskts., 75c@$3; Quinces, No. 1 bu., $1.50@2 grapes, state, Del. crate, $2@2.25; Cond., bskt., $1.40@1.55; Niagara, bskt. $1@1.25

YORK PRODUCE

—Oct. 23, 1920

If anything, the markets were less active this week than for a long time. There seems to be little demand for anything in the eating line; corn, tomatoes, apples and potatoes, all were at a standstill

Eggs—75@78c dozen.

Butter—Country, 65@70c lb.; separator, 70@75c lb.; milk, 14c qt.

Poultry—Hens, 25@30c lb.; springers, 35c lb.; dressed, $1@2 each.

Vegetables—Potatoes, $1@1.25 bu.; 15@25c ½ pk.; lettuce, 5c head; cabbage, 5@10c head; beets, 5c box, radishes, 5c bch.; onions, 5c bch.; 15@20c ½-pk.; corn, 20@40c doz.; peppers 15@20c doz.; lima beans, 40c qt.; soup beans, 25c qt.; eggplants, 4@10c ea.; squash, 3@5c ea.; ham, sliced, 45@80c lb.; whole, 40@45c lb.; lard, 25@28c.

Fruit—Apples, 10@40c ½-pk.; box, 8@18c; 50c@$1.50 bu.; pears, 15@40c ½ pk.; tomatoes, 1@20c ½ pk.

Retail Grain Market—Wheat, $2.50; corn, $1.50; oats, $1; rye, $1.75; bran, $3 cwt.; middlings, $3.75 cwt.

Wholesale Grain Market—Wheat, $1.90; corn, $1; oats, 55c; rye, $1.40; bran, $45 per ton; middlings, $60 ton.

LIVESTOCK MARKETS

LANCASTER

—Oct. 23, 1920.

Cattle—Receipts, 4606 head; trading slow; prices steady; good to choice steers, $12.50@13.50; fair to good, $12@12.50; medium, $10.50@12; common, $8.50@10.50; fair to good bulls, $9@10.50; medium, $7.50@9; common, $6@7.50; choice to prime heifers, $11@12; good to choice, $10@11; medium, $9@10; common, $5.50@9; good to choice cows, $8@9.50; medium, $6.50@8; common $5.50@6.50; canners and cutters, $3@5.50; good to choice feeding steers, $10.50@12; fair to good, $9@10.50; common, $7@9; good to choice stock steers, $9.50@11; fair to good, $7.50@9.50; common to fair, $5.50@7.50; good to choice stock bulls, $8.25@9; fair to good, $7@8.25; common to fair, $5@7; good to cohice stock heifers, $8.50@9.50; fair to good, $6.50@8.50; common, $5@6.50.

Calves—Receipts, 290 head; good to choice, $16.50@17.50; medium, $12@16.50; common, $5@12.

Hogs—Receipts, 328 head; market active; prices lower; only fair grade, $14@15; lightweight, $13@14; roughs, $10@12.

PITTSBURGH

Cattle—Receipts, 2400; steady; steers, $14.70@15; heifers, $9.50@11; cows, $8@9.

Hogs—Receipts, 7500; lower; heavies and heavy yorkers, $13.25@13.50; light yorkers and pigs, $12.50@12.75.

Sheep and Lambs—Receipts, 500; steady, top sheep, $7; top lambs, $14; higher.

Calves—$9; lower; top, $16.

EAST BUFFALO, N. Y.

Cattle—Receipts, 2800; active, good; heavy and handy, 25@50c higher; others steady; prime steers and shipping steers, $13.50@16.50; butchers', $8.50@16;; yearlings, $15.50@17; heifers, $6@11; cows, $2.50@9.50; bulls, $5@9; cows and springers, $60@120.

PHILADELPHIA LIVESTOCK

—Oct. 23, 1920.

Receipts of the week ending Oct. 23, 1920, were as follows:

	Beef Cattle	Sheep and Lambs	Hogs
Totals for week	2,630	8,365	10,208
Previous week	2,504	1,065	7,915

Calves—Receipts of calves were 1,880 head against 1,647 head previous week.

Beef Cattle in better request and values steadily maintained under moderate offerings Quotations: Steers, good to choice, $13@14.50; fair to good, $11.50@13, common to fair, $10@11.50; cows, good to choice, 8½@9½c; do, fair to good, 7@8½c; bulls, 6@8½c; calves, extra to choice, $19@20; fair to good, $16@18; common, $12@13; Tennessee, $16@17; other southerns, $7@12.

Sheep and Lambs—Sheep were in fair demand and steady, while lambs sold slowly at former rates. Quotations: Sheared sheep, wethers, extra, $7.50@8; do, good to choice, $6.50@7; medium, $5@6; do, common, $2@3; ewes, heavy, fat, $5.50@6; lambs, spring, choice, W. Va., $11.50@12; choice, Penna., $11@11.50; medium, $10@11; common, $8@9.50.

Hogs—Offerings were liberal and the market was dull and lower under weaker outside advices and more general pressure to sell. We quote: Best western, $16.50@17; nearby, $15@15.50.

City Dressed Stock—There was a fair demand for steers, heifers and cows and values were steadily maintained. Lamb was in fair request and steady. Veal and mutton ruled steady, with demand fair for fine stock. Hogs were weak and lower. We quote: Steers, 20@26c; heifers, 16@20c; cows, 10@16c; calves, city dressed, choice, 28@30c; calves, country dressed, 26@28c; lambs, spring, choice, 27@28c; sheep, 10@18c; hogs, 24c.

PHILADELPHIA HAY AND GRAIN

—Oct. 23, 1920.

Baled Hay and Straw—Receipts, 60 tons of hay and 1 car of straw. In small supply and quiet at former rates. Timothy hay, No. 2, $32@32.50; No. 3, $28@29; sample, $23@25; no grade, $18@21; clover mixed hay, light mixed, $30.50@31; No. 1 mixed, $28@29; straw, No. 1 straight rye, $20.50@21; No. 2 do, $19@19.50; No. 1 tangled rye, $17@18; No. 2 do, $10.50@17; No. 1 wheat straw $16.50@17; No. 2 do, $16.

Bran steadily held but quiet. We quote car lots, including sacks: Soft winter bran, western, in 100-lb. sacks, per ton, $42@43; spring bran, in 100-lb. sacks, per ton, $41.50@42.

Corn—No. 1 yellow, $1.07@1.09.

Wheat—New; No. 3 red winter, $2.23@2.28; No. 2 red winter garlicky, $2.06@2.11.

Oats—No. 2 white, 64½@65½c; No. 3 white, 63½@64½c.

PITTSBURGH HAY AND GRAIN

—Oct. 23, 1920

Arrivals of hay very light while the demand seems to have improved somewhat within the last week. The call is more particularly for No. 1 clover mixed and No. 1 clover hay, which grades are coming forward sparingly. No. 1 timothy can be disposed of at quotations. In fact, all good grades find ready sale. Straw arrivals altho light, are about sufficient to meet the demand. Oats, ear corn and shelled corn meet with only a normal demand. Difficult to dispose of even at quotations.

No. 1 timothy, $32.50@33; standard, $30.50@31; No. 2 timothy, $28.50@29.50; No. 3 timothy, $25@26; No. 1 light clover mixed, $29@30; No. 1 clover mixed, $31@32; No. 1 oat straw, $17@17.50; No. 2 oat straw, $16.50@17; No. 1 wheat straw, $16.50@17; No. 2 wheat straw, $16@16.50; No. 1 rye straw, $17@17.50; No. 2 rye straw, $16.50@17; No. 2 white oats, 61@61½c; No. 3 white oats, 58@59c; No. 2 yellow ear corn, $1.10@1.15; No. 2 [illegible] shelled, $1.01@1.02

NEW YORK HAY AND GRAIN

—Oct. 23, 1920.

Feed—The market for mill feed was barely steady as offers were quite liberal and there was a disposition to limit purchases to small amounts. Canadian feed was being offered here and Canadian bran from Saskatchewan sold here recently at $39 delivered New York.

Quotations: City feed bran, $40; middling, $41, in 100-pound sacks, red dog, $76, nominal, in 100-pound sacks; Western spring bran, $40; standard middling, $41; flour middling ,$51; red dog, $65, all in 100-pound sacks, 30-day shipment. Oat feed, $22, rye middlings, $39; white hominy feed, $45, all in 100-pound sacks Cottonseed oil meal, $51.50; linseed oil meal, $57, in 100-pound sacks.

Hay and Straw—Market closes steady to firm but without material change in prices. In Brooklyn there is very little hay available and occasional cars are reported working out above quotations. Rye straw steady. Oat straw quiet and easy.

Hay—Large bales, timothy, No. 1, $39; No. 2, $36@38; No. 3, $33@34; shipping, $29@31; no grade, $20@26; clover-mixed, fancy, $30@38; No. 1, $33@34; No. 2, $29@31. Straw, large bales—No. 1 rye, $26; No. 1 oat, $17@19.

Wheat—No. 2 red, c. i. f., $2.23¾; No. 2 hard, $2.23¾.

Corn—No. 2 yellow, $1.08¼; No. 2 white, $1.09¾.

Oats—No. 1 white, 66c; No. 2 white, 65½c; No. 3 white, 62½c.

Rye—C. i. f., $1.87¾; **Barley**, feeding, $1.04@1.07.

PHILADELPHIA DAIRY MARKET

—Oct. 23, 1920.

Butter—Receipts, 1862 tubs. As usual on the last day of the week there was little trading and the market showed no important change. We quote: Fresh, solid-packed creamery, high-scoring goods, 59½@61½c, the latter for jobbing sales; extra, 58½c; do, extra firsts, 57c; firsts, 47@50c; seconds, 41@45c; sweet creamery, choice to fancy, 60@62½c; fair to good, 50@59½c; ladle packed, as to quality, 37@39c; packing stock, 32@35c; fancy brands of nearby prints were jobbing at 67@70c; good to choice, 59@66c; fair, 56@58c.

Cheese—Sold slowly at former rates. We quote: New York, whole milk current make, fancy flats, 26¾@27c; common to fair, 23@26c; Longhorns, 26¾@27c; single Daisies, 26½@27c; jobbing sales of fancy goods, 29@30c.

TOBACCO MARKET

—Oct. 25, 1920.

The regular meeting of the local tobacco growers' association was characterized by the favorable reports concerning the condition of the matured new crop and settled various reports as to prices, present and future; concerning the former it was proven that the late growth, cutting and curing seasons never were better. The only sign of damage, was a pale turn which at one time was threatened, but fortlunately averted by a change in weather without damage.

Prices were not so encouraging, sales were reported at from $20@10 to $35 per cwt. members from Stevens reported sales at $24 and $8 to $25 and $8; from Lititz, $27 and $10 to $30 and $10; from Reidenbach's Store, $22 and $10 to $23 and $10; from Narvon, $20 and $10 to $23 and $10. While a few sales were made at the above prices the same were not sufficient to arouse a general selling movement generally all growers holding for more money. The sentiment for better prices was encouraged by reports from Wisconsin and Ohio, where, it is said, that early sales were made at $50 to $60 and even $75 per cwt., however, prices here seem to have declined according to the same report but are higher than offered in Pennsylvania.

Organizers were interested in the report that in New England the organizations there have combined under the name of the Connecticut Valley Tobacco Growers, Inc. The organization will control the greater part of the product of that section and will be a great benefit to the members. In the Furley section several local branches were organized during the week.

NEW YORK MILK MARKET

—Oct. 25, 1920.

Warm weather the past week helped the retail demand, but market still very flush and surplus heavy. There is virtually no wholesale demand at the present time. The October rate for 3 per cent milk in 200-mile zone is $3.65 per 100 lbs.; 3.6 per cent milk is $3.89 and 4 per cent milk is $4.05.

Receipts of milk and cream in 40-quart cans for the week ending October 23, 1920, were as follows:

Railroad.	Milk	Cream.
Erie	39,044	2,478
Susquehanna	12,523	[illegible]
West Shore	14,814	1,926
Lackawanna	58,977	[illegible]
New York Central (Long haul)	188,953	[illegible]
Ontario	16,725	[illegible]
Lehigh Valley	50,880	[illegible]
New Haven	6,700	[illegible]
Pennsylvania	12,122	[illegible]
Other sources	6,500	[illegible]
Totals	438,147	[illegible]
Same week last year	384,972	[illegible]

INTERSTATE MILK PRICES

—Oct. 23, 1920

Prices for milk delivered to Philadelphia by the farmer in effect for October are as follows: Three per cent milk, $4.20 per cwt. or basic quantity price per quart of 9.3c; 3.5 per cent milk, $4.40 per cwt. or basic quantity price 9.6c per quart; for four per cent milk, $4.60 per cwt., basic quantity price of 10c per qt. The price for surplus milk 3 per cent, $2.41 cwt.; 3.5 per cent, $2.61 cwt.; 4.0 per cent, $2.81 cwt. at receiving stations. When milk is received [illegible] the price f. o. b. Philadelphia [illegible] per quart.

Farm Products Prices and Prospects

GENERAL OUTLOOK IN THE AGRICULTURAL MARKETS

All the price indexes, those peculiar thermometers used to measure the cost of living and general price trends have declined sharply during the last few months. Unfortunately a good many of them are based largely on wholesale prices or on raw materials so that they may give a distorted notion of what has actually taken place as in a declining market the consumer may not notice the effect for several months after prices to the producer have been cut. The British and Canadian indexes are declining as well as those in the United States.

If misery loves company, then farmers who have been hard pressed to meet creditors as a result of price declines can find consolation in the fact that the number of business failures is gradually increasing. The September number was only slightly greater than for August but the liabilities involved increased 150 per cent over August and were only $20,000,000 less than for the entire year of 1919.

Since wage reductions usually trail behind price declines, it is suggestive of our present business position that wages have been reduced in a few instances, mostly in cotton and woolen mills where it was a choice between mill shutdowns and accepting lower wages. They have run from 10 per cent to as high as 25 per cent in a few southern mills. The volume of employment in New York industries has declined about 7 per cent during the past 6 months, amounting to about 100,000 persons. In the Middle West reports show even greater declines in employment. This means a reversal of the trend of labor to the industrial centers which presently should relieve the farm labor problem.

Are Farmers' Financial Requirements Peculiar?

The numerous delegations of farmers which have gone to Washington urging special financial relief measures thru the Federal Reserve Board or the Treasury Department, may have placed farmers in a false light in the community as it appears that they alone of all groups have asked for special privileges in this way. That agriculture is the backbone of the nation, that farm prices have been hardest hit by the recent decline and that prices below cost of production in the future were sufficient justification for their mission but they were not so considered by the officials before whom the requests were placed.

However, the protests may draw attention to the peculiar needs of farmers under such conditions in contrast with the needs of manufacturers and merchants. When the latter groups needed additional funds to tide over the unfavorable markets of the last few months, they have gone not to the banks but direct to investors thru the issuance of bonds. In this way, they have had access to a great deal of money as the country's investing power is large. Nearly $400,000,000 of new issues of bonds, including several of foreign governments have been absorbed within the last two months.

But this method of obtaining funds is not open to the farmer who naturally turned to the banks and endeavored to obtain thru intervention of Federal officials what the locals banks were unwilling to give. This leads to the question as to the desirability of changing the farm business by capitalizing and incorporating it so as to open such a means of obtaining funds at least to farmers who operate on fairly large scale. The McFadden bill introduced in the last Congress is intended to provide for the rating of farm credit so that insurance companies and investment corporations could underwrite farmers paper and may provide relief from the present limitations of farmers.

British Coal Strike Undermines Grain Prices

New low prices for cash corn and oats were registered the past week, and wheat broke badly due largely to the strike of the British coal miners. Sterling exchange dropped to around the lowest figures since last March. It is expected that the market will recover part of its lost ground when the strike is settled but there is little in the situation at the moment on which to pin faith in a belief that much higher prices will be witnessed in the near future. For the time being, and probably for sometime to come the economic conditions of the world will continue to dominate the grain markets and it would not be surprising to see prices still lower before any real advance comes.

The Outlook For Wheat

It will be several months before an entirely clear view can be secured as to the total world's supply due to the fact that Argentine and Australia will not harvest until December and January. So far reports from those countries have been favorable, rains coming when needed. Lowering the price does not increase the supply of wheat a single bushel but it only increases the buying power of Europe and results in increased consumption. The world is running close to the supply being smaller than the demand, and all reports indicate a close adjustment.

Foreign purchasers continue to buy wheat upon all declines of consequence, continental countries being most active the past week as Britain was engaged with the coal strike. Clearances for last week were the smallest for several months.

A few weeks ago world's export surpluses were increased by an advance in the Canadian estimate and by improvement in the promise of the Australian and Argentine crops, which indicated some margin of world's export surpluses over import requirements. Within the last ten days the tide has turned, India being stricken from the exporting list because of drouth and several reports indicate that the Canadian estimate is too high. The official estimates in Canada are not so carefully made as our own. The fact that the spring wheat crop in our Northwest was cut down sharply by the late estimates casts doubt upon the Canadian estimates which were increased decidedly late in the reason. Usually climatic conditions in the two sections show more harmony.

It is estimated that Canadian wheat and oats are now relatively higher than domestic grain at the seaboard when everything is taken into consideration. Canada, however, continues to send wheat into the United States freely, and mills there have been offering flour at much lower figures than American manufacturers. The move to have the Canadian government control the selling of wheat as it did last year has proved fruitless. An embargo on Canadian wheat would have a transient but no permanent effect on our markets since exporters would merely buy more Canadian and less American wheat.

Grain is being sold rather freely by farmers in practically all sections of the country, Kansas being forced to sell large amounts of wheat altho that is the section in which organizations which plan to stop selling wheat this week until the price advances are strongest. Flour buyers continue apathetic so that visible stocks of flour are larger than a year ago altho mills have been running at only about half capacity.

Coarse Grain Markets Remain Weak

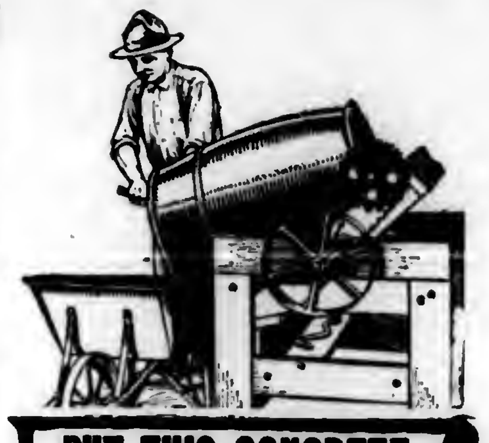
Cash corn has dropped to the lowest figures since 1916 due to the large receipts and slow demand. Several million bushels of corn were taken for export by Europe, but it failed to affect the price very long. Argentine still has around 90,000,000 bushels of corn available for export but the quantities shipped from the United States must be small from necessity, as we have passed the stage where we send the grain out, the bulk of the export business being in the shape of hog products. The open fall weather has been decidedly favorable for corn gathering and may result in a big early fall movement of new corn. As the crop size and reduced feeding operations mean a big surplus to be sent to terminals which already hold the biggest visible supply of many years. Oats markets continue to reflect the big crop of feed grains and the absence of any tendency to buy beyond immediate needs. The visible supply has grown to tremendous size and probably will remain large for several months. Argentina has an oats surplus considerably below average.

Butter Market Demoralized

Extreme weakness and sharp declines in undergrades cover the butter market the past week. Fancy butter held its own fairly well as it has done all thru the year because of scarcity. Dealers had to work hard to make every sale and owners and shippers suffered heavy losses. Buyers were afraid of the market and some lots had to be stored because they were unsalable. Next to storage butter, centralized cars declined most, falling from 52 cents last Friday at Chicago to 47 cents this week. Storage extras sold as low as 52 cents at Chicago.

Cheese Markets Show Weakness

Eastern cheese markets were barely steady the past week while Chicago was decided unsettled. Both fresh and held goods were offered and reasonable bids accepted. Most of the trade consisted of less than carlots. Extra fancy goods and to a lesser extent white cheese sold at a premium. While declines were not so large in eastern markets as at Chicago, they were noticeable, with held goods made at high cost not offered at reduced prices.



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SELECTING FEEDING CATTLE

By Prof. W. H. Tomhave

The time of the year is at hand when most of the cattle for the winter feed lot are selected. The success of the work during the winter will depend to a large extent upon the kind of cattle that are selected. Cattle of good quality and breeding will always do best in the feed lot. They will make the greatest number of pounds of gain for every hundred pounds of feed consumed.

It does not always hold true that the cattle of the better quality and breeding make the most money for the feeder on account of the difference in price. The demand for the better feeding cattle is usually much greater than for the cattle of poor quality and for that reason there is this difference in price. If the poorer grade of feeding cattle can be purchased at a price that seems low compared with good cattle, it may be advantageous to buy such cattle because of the possible spread between the buying and selling price, even though the cost of producing one hundred pounds of gain is higher on account of the greater amount of feed consumed.

Cattle to do well in the feed lot need not be in high condition of flesh when purchased. If they are of the proper type and breeding they will make satisfactory gain even though they are thin. In the selection of feeding cattle, the breed is of minor importance but the cattle should show a predominance of blood of one of the beef breeds. One breed will give practically as good results as another if given the same care and attention.

The ideal feeder is the steer that will consume a large amount of feed and make a high average daily gain. The steer that consumes a large amount of feed and produces only small gains is very objectionable from a financial point of view. One of the first things to consider in the selection of a feeder is the kind of head that he possesses. It should be broad, short, clean-cut and have large, clear-cut eyes and large nostrils. A long, rangy and narrow head is objectionable and does not indicate a good feeder. The mouth should be large and the jaw strong. There should be no indication of coarseness. Associated with a strong head, we usually find a well-formed body. The back of a feeding steer should be straight from the shoulder to the rump and tail head. A drooping rump is objectionable as such a steer will not carry the flesh out well over the round when finished. The neck should be short and set close to a smooth and well covered shoulder. A coarse, heavy shoulder is objectionable in a good feeder. A long, thin neck should be avoided in selecting feeders, as such cattle usually possess a long, thin body. The back should be wide over the ribs and loin to allow plenty of surface for the deposit of flesh and fat during the fattening period.

In addition to a good head, neck, shoulder and back, the feeder should have a deep middle and heart girth. A steer that is deficient in the heart girth very rarely if ever proves to be a good steer to put on weight. A good, deep middle is necessary in order to consume a large amount of feed to be converted into the finished product. An excessive paunch is undesirable, but the feeding capacity or size of middle should come from a good spring of rib with depth and width of body. The hips of the steer should be smooth and not too wide apart as steers with coarse rough hips are slow in finishing. The legs should be straight and short and possess bone of fine quality. Coarse, rough bone usually indicates coarseness and poor quality of flesh when the steer is finished for market.

The steers that are selected for feeding should be as near the same type, age, and weight as possible. Such cattle when uniform in type and quality, can all be fed alike and will respond better to such feeding than if the cattle are different in age and size. A uniform lot of cattle not only make a much better appearance while in the feed lot, but they will command a better price when they are ready for market than can be secured for a group of cattle that are not uniform in age, color, weight and type.

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Chronic Founder—Brittle Hoofs.—I have a work horse that I purchased last spring. After working him all summer his fore hoofs seemed to have broken off too much. My neighbor tells me that he may have foundered before I bought him, and in order to treat him properly he must be kept in the stable a few months, until new hoofs grow on. G. W. C., Nicholson, Pa. Your horse should be shod with wide webbed shoes and leather sole, bottom of foot filled with tar and oakum. Standing him in wet clay 2 or 3 hours a day will do him much good. he is not lame and not suffering pain, it will do him good to do farm work.

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Infected Udder.—I have a cow that came fresh last spring. Clotted and stringy milk comes from one teat. M. W., Princess Anne, Md. Apply equal parts camphorated oil and fluid extract of poke root to infected udder once or twice a day. Give her a tablespoonful of hyposulphite of soda in feed once or twice a day. It is perhaps needless, for me to say that hands of milker, milking utensils, udder and hind quarters of cow should be kept clean. Milk her in a clean place.

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Rome N. Y. December 2, 1919
Fifth Avenue Bargain House,
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Tie That Binds Producers Together

Crop Contracts an Essential Feature of Cooperation---By Herman Steen

(We would advise the members of the Dairymens' League who are being alarmed and stampeded over the pooling contract question, and others interested in co-operative selling to read this article. It explains the success of the co-operative associations of California. A crop contract plan, together with the pooling system, has made the Pacific coast growers the most successful and best organized farmers in the United States.—Editors.)

(Copyright, 1920, by Standard Farm Papers, Inc.)

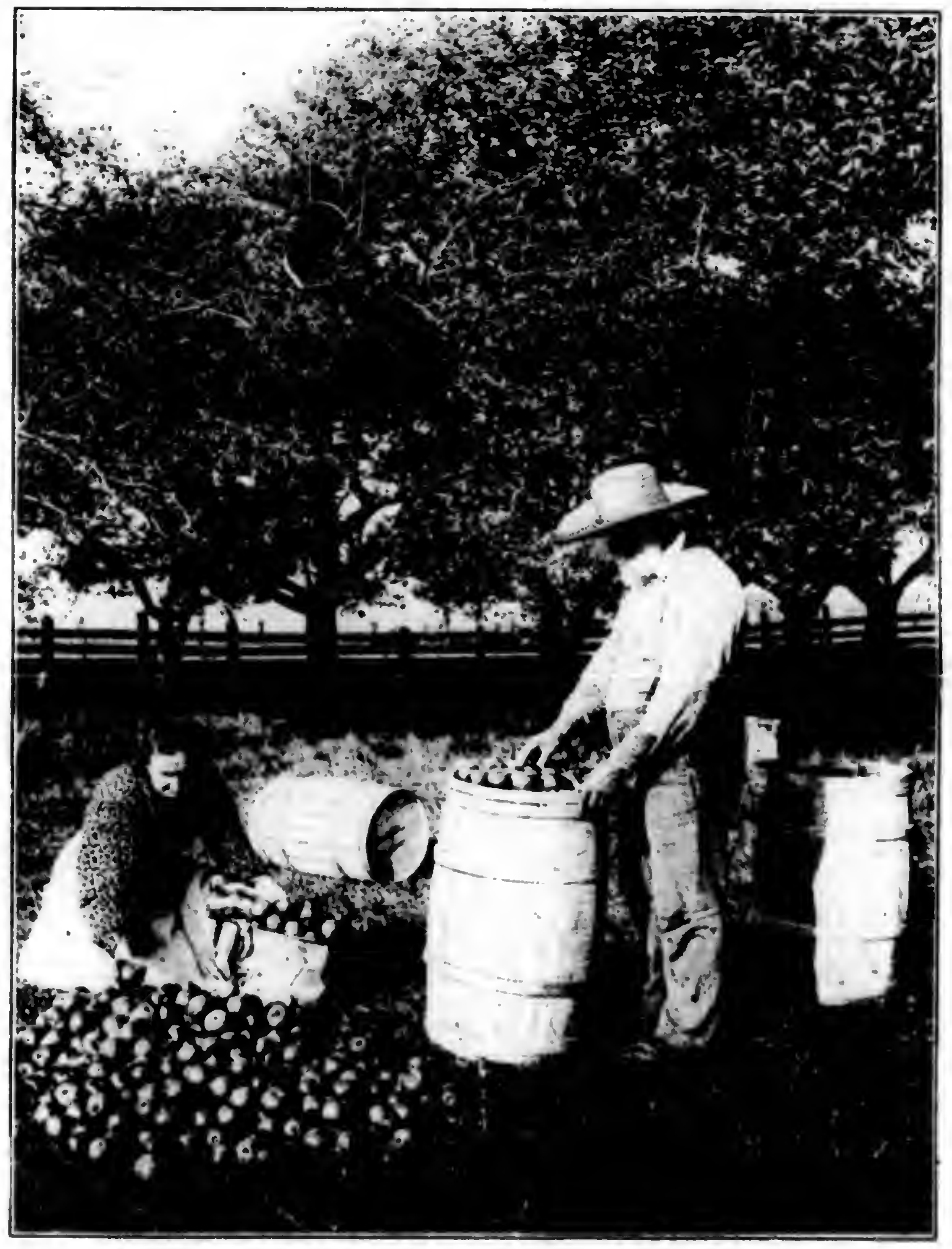
When a California farmer joins a co-operative marketing association, he signs a contract which requires him to deliver all of his crop to the association. This contract extends over a period of years, and provides that the grower shall pay damages to the association if he sells his crop to any outside dealer.

This binding crop agreement is one of the essential features of every co-operative marketing association of consequence in California. This applies not only to the giant institutions which market the oranges, raisins and prunes, but also to the little fellows which handle a few carloads of alfalfa or the honey produced by a small district.

The leaders in California co-operation borrowed this idea from Denmark, where it was used by the bacon and butter selling societies. The Danish co-operators regarded it as a fundamental feature, because it kept their rivals from breaking up the societies by temporarily paying higher prices for the products of the members. The California co-operators have found the contract as essential to their success as did the Danes, and have worked out many improvements over the Danish model.

Solves Financial Difficulties

Originally, the crop agreement was used only as a means of keeping the members of an association in line. It was regarded mostly in the light of safeguarding an association's supply of products. This, of course, is still the primary purpose of the crop agreement, but it has also been found to be the key which unlocks the financial difficulties of co-operative associations. Briefly stated, the crop agreements give the association title to the product when it is delivered, and this allows the association to borrow money to pay advances to the growers. The association can then market the crop at the most favorable time, which it could not do if the growers were constantly demanding money from the sale of their crops, as was the case before this plan of contract and finance was perfected.



Careful Grading and Packing is Necessary to Obtain Good Prices

Even a casual study of the history of co-operation in California reveals the fact that the crop contract is an absolute essential to success in co-operative marketing. Today there is not a single co-operative association in existence in California which does not require such contracts, but I was unable to find trace of such, and farm leaders on the Pacific coast were unable to name any. Of all the many co-operative associations which have failed, only two or three employed the crop contract. Those particular organizations failed, I am told, because their crop contracts were imperfect and could be evaded.

An Essential to Success

Every leader of co-operative thought and action with whom I talked recently when studying co-operative enterprises in the Far West sought to impress upon me that the crop contract is the second great essential to success in co-operative marketing, the first being organization by commodity. Even the leaders of the two opposing schools of co-operative thought are in harmony on this question. I refer to Aaron Sapiro, of San Francisco, and G. Harold Powell, of Los Angeles, who have differed quite sharply at times in regard to the fundamental principles of co-operation.

There are different kinds of contracts in use by the co-operative organizations. The California Almond Growers' Exchange, for example, has no contract as such, but every member is required to sign the by-laws of the association, which provide that members must sell all their almonds through the organization. This, of course, has the same effect as a separate contract specifically requiring the same thing.

Different Kinds of Contracts

The egg associations likewise have simple contracts requiring the delivery of all eggs produced and stating the damages that may be collected by the association in case of violation of contract by the producer. The California Fruit Growers' Exchange (the citrus association) has three contracts, one between the central exchange and the district exchanges, one between the district exchanges and the local associations, and one between the local associations and the producers of citrus fruit. Each of these contracts specifically sets forth the things that each party is required to do.

The contract of the raisin growers, on the other hand, guarantees a minimum price to the growers of raisins. It provides also that in case the land is sold the new owner must fulfill the provisions of the contract. This latter provision has many good lawyers say that it would not be sustained in court, though it has never been tested.

What is probably the most complete contract between association and grower is the new prune and apricot crop agreement, which will soon go into effect between the California Prune and Apricot Growers, Inc., and its 8,000 members. It was drawn by Adron Sapiro, attorney for the prune and apricot growers, and covers more contingencies than any other contract used in California. Nothing is left to verbal understanding and agreement—everything is put down in black and white so that there is no possibility of misunderstanding. It is regarded as the most perfect contract of the sort ever devised.

Essential Points of Prune Contract

The prune and apricot contract contains close to 3000 words and the membership agreement close to 5000 more, so space forbids printing it, in full. The salient feature, however, may be reviewed as follows:

1. The grower agrees to help carry out the express aims of the association, which are co-operative marketing, elimination of speculation and waste, and stabilization of prune and apricot markets in the interest of growers and public alike.

2. The association agrees to buy and the grower agrees to sell all of the prunes and apricots produced by the grower during 1922, 1923, 1924, 1925 and at the option of the association during 1926, 1927 and 1928. (The present contract includes the crop of 1921).

3. The grower agrees that the crop has not been contracted to anybody else.

4. The grower agrees to deliver all fruit as early as possible, but in no case later than September 10 for prunes, and to abide all rules of the association in regard to grading, packing, delivery, etc.

5. The association agrees to pool all fruit of similar grade and character and to sell each grade separately.

6. The association agrees to sell all fruit delivered to it, and to pay the grower the average price received for the grade he produced, minus the cost of operating the association. The grower agrees to accept this amount as payment in full.

7. The association agrees to pay a substantial advance to the growers at the time the crop is delivered, and to distribute proceeds as rapidly as possible through the year, but final payment shall be made not later than July 1 for apricots and October 1 for prunes. (These dates refer to the year following delivery).

8. The association is allowed to sell the prunes and apricots when and where it deems fit, under such conditions as will serve the grower and the public.

9. The association's subsidiary (the warehousing corporation) capital stock is to be retired by profits made in mechanical handling of the prunes.

10. The grower is allowed to sell any or all of his fruit to dealers or shippers of fruit, provided he does not sell to any speculator who might interfere with the sale of the dried fruit handled by the association.

11. If a grower transfers his orchard or fruit to a relative, he shall be liable for damages in case the fruit is sold to an outside dealer.

12. The association recognizes crop mortgages if it is notified in advance concerning them.

13. It is agreed that all contracts between the association and growers shall be substantially alike.

14. If a grower violates his contract by selling dried fruit to outsiders, he agrees to pay to the association two cents per pound damages on prunes or four cents per pound damages on apricots, plus expense of collection. This is what puts teeth into the contract, and makes a man think twice before he tries to break it.

Under the provisions of the damage clause, practically every co-operative association in California has brought suit against growers for violation of contract. In every single case, so far as I was able to learn, the association has won and the growers were ordered by the courts to fulfill their contracts. The association does not usually sue for damages as much as it does for fulfillment of contract. One such case has recently been appealed to the Supreme Court of Claifornia, which has not yet announced a decision.

Importance of the Contract

Some of the important reasons why the binding contract is the cornerstone of co-operation are thus summarized by Attorney Sapiro:

1. It insures the association a definite acreage over a period of years, and from this the actual volume of business can be estimated quite closely. This stabilized the association and permits it to operate to better advantage than would be possible otherwise.

2. It puts the association in a strategic position on the market. It gives the farmer a representative on the market, which he never had had heretofore. A commission man is often worse than no representative at all, and as often as not is secretly representing the man who buys from the farmer.

3. It eliminates competition in buying, and the association's business cannot be broken by speculators who are willing to pay high prices and lose money temporarily in order to accomplish that purpose.

4. It allows the association to put all of its efforts on efficient production. The man who is tempted by a cent a pound cannot seriously injure an association.

5. It provides a means of securing credit, so that crops may be moved and first payments made before they are actually sold. The fact that the association secures title to the crops when delivered allows it to borrow money and make first payment at that time. The contract has thus solved the financial question in co-operaiton to a large extent, for bankers lend money readily on the basis of the contracts.

Practically all of the large co-operative associations in California are increasing the percentage of crop controlled. The success of the associations in securing renewal of these ironclad coutracts is assurance that the growers recognize the justice of the crop contract and the necessity for its use.

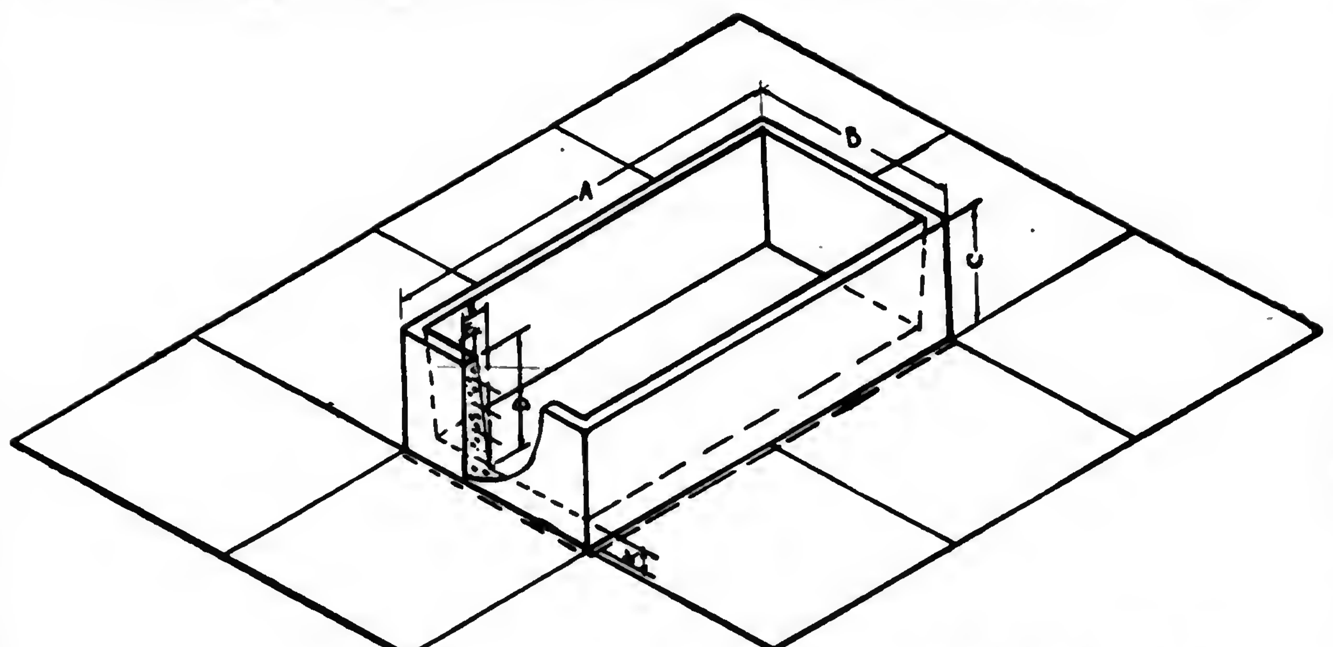
CONSTRUCTION OF A STOCK TANK

By Harley M. Ward

Rectangular tanks are preferred by many farmers who wish to do their own concreting, because of the simple forms used and the consequent ease with which tanks of various sizes may be made. The capacity to be provided for will be determined by the number of head of stook to be watered. No one intending to build a rectangular tank should decide upon its dimensions until after a careful study of the the accompanying table, which shows the capacities of tanks of various dimensions and the quantities of construction materials required. From this table it will be observed that the quantities of materials required for two tanks of approximately the same capacity, but slightly different dimensions, vary considerably.

Floor and Sub-base

If the ground is firm and has good natural drainage, no sub-base will be required. If it is spongy or soft, however, either the site should be covered with a well-tamped layer of gravel or earth, raising the level of the tank and floor above that of the barnyard, or about a foot of earth should be removed and replaced by gravel, with a line of tile for drainage.



RECTANGULAR STOCK TANK
FIGURE ONE

Drainage from beneath the pavement to a natural outlet should be provided, regardless of whether or not a sub-base is used. In laying the pavement, an opening should be left in the center, one inch larger in each direction than the base dimensions of the tank. The pavement should be sloped away from the tank, and divided into sections not over six feet square, as shown in the drawing herewith.

Forms

Forms should be constructed of 1-inch lumber with 2 by 4-inch braces and stiffening. The outer form is made as high as the tank is to extend above the pavement, and is built in four separate sections, which can be nailed together at the corners when needed. The inner form is as high as the depth of the tank and is set in an inclined position to give a batter to the inside of the tank wall, which will relieve the tank from ice-pressure. The inside form should be completely nailed together, so that it can be lifted into position as soon as the concrete for the bottom of the tank has been placed. Concreting should not be interrupted after it is begun; the whole tank should be constructed at one operation, in order to eliminate construction-joints. Forms should be painted with equal parts of boiled linseed oil and kerosene. Outer forms should extend below and inside the inner edge of the pavement one-half inch all around, so that the tank will be separate from the floor-slabs.

Concrete

When the forms for the tank are ready, the concrete should be thoroly mixed, in proportions of one sack of Portland cement; 2 cubic feet of clean, coarse sand, graded in size up to ¼-inch and 3 cubic feet of hard, durable gravel or broken stone, varying in size from ¼-inch to 1½ inches with sufficient water to produce a "quaky" consistency; that is, the concrete should be wet enough, so that when deposited it will settle in place of its own weight, but should not contain water enough to cause a separation between the coarse aggregate and the mortar.

Reinforcement

There should be imbedded in the concrete, 2 inches from the outer form, ¼-inch round reinforcing rods. These should run all the way around the tank, and should be placed eight inches apart, and be lapped 16 inches. If more than one length is necessary to encircle the tank, the separate pieces should be lapped the same distance, the general rule being to lap rods or similar reinforcement to distance equal to 64 times the diameter of the rod. Laps should be made at a side, never at a corner. Floor reinforcing of the tank should consist of a network of ¼-inch round rods placed nine inches apart in both directions; or heavy wire mesh may be substituted for the rods as reinforcement for the entire tank. In the latter case the floor reinforcing should be carried up into the side and end walls (being lapped at corners) and extend to a line one inch below the top of the completed tank, where the reinforcing mesh should be bent to conform with the edge of the tank itself.

Finishing

Particular care should be taken to force back the coarse particles of aggregate about the face of the tank walls, and to bring the mortar to the surface by spading next to the forms while the concrete is being deposited, in order to provide a dense, imprevious surface. Forms should not be removed until concrete has hardened sufficiently to prevent damage. Under favorable conditions the inner form may usually be removed in two or three days. If the concrete was properly spaded next to the forms, no facing will be needed, and any slight irregularities may be filled with a mortar of one sack of Portland cement to one cubic foot of sand, rubbed in with a wooden float, care being taken to thoroly wet the surface immediately before applying the mortar. The inside surface may be trowelled smooth if desired.

DIMENSIONS AND MATERIALS FOR RECTANGULAR TANKS

CAPACITY IN BARRELS	DIMENSIONS FOR FIGURE 1							MATERIALS		
	A	B	C	D	E	F	K	SACKS CEMENT	CU FT SAND	CU FT GRAVEL
56	16	8	2'-11"	2'-2"	6"	4"	9	39	75	98
48	16	7	"	"	"	"	"	35	68	89
40	16	6	"	"	"	"	"	31	60	80
42	14	7	"	"	"	"	"	31	60	80
34½	14	6	"	"	"	"	"	28	54	71
28	14	5	"	"	"	"	"	24	47	62
31	12	6	2'-10"	"	5"	3	8	21	40	52
25	12	5	"	"	"	"	"	18	35	46
19½	12	4	"	"	"	"	"	15	30	39
21	10	5	"	"	"	"	"	15	30	39
16	10	4	"	"	"	"	"	13	26	33
11	10	3	"	"	"	"	"	11	21	27
13½	8	4	2'-9"	"	4"	2	7	9	17	22
9½	8	3	"	"	"	2	7	7	14	18
7	6	3	"	"	"	2	"	6	11	14
5½	6	2½	"	"	"	2	"	5	10	12

HOW WORK IS DONE

Editor Pennsylvania Farmer:

Dear Sir:—I was very much interested in your letter stating that a correspondent doubted some of the assertions concerning our work, as published in Pennsylvania Farmer October 9th.

First of all, we will modify the statement that "two men cared for 675 hens, 28 cows, did the chores, grew and gathered 65 acres of grain, 30 acres of corn and 50 acres of hay." As stated in the article, there was three of us on the farm—Father, my brother and myself, and occasionally we hired a boy of 15 years by the day to help out. With this slight correction of the above statement we can very easily show how it was done.

The chickens were all kept in a long, multiple unit laying house with feed room in center, water system in each pen and everything arranged to save labor as much as possible.. It only took one man about one hour per day in summer and about two hours in winter to care for this flock.

The cows were kept with the covered yard system which minimized labor and the milking was done with a milking machine. In this way one man could do the entire dairy work, in about four hours per day.

In reference to the crops, practically all of the field work was done by my brother and myself with two two-line tractors. Because of their two-wheel feature, they were very adaptable to all farm work, minimizing labor and almost entirely replacing horses.

I trust this answers your inquiry.—J. Percy Van Zandt.

The census bureau and the public press, in calling attention to growth of cities as shown by recent tabulations, should remember that no nation can afford to have cities and towns grow at the expense of the country.

Soils and Fertilizers

Conducted by Dr. J. G. Lipman

Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

THE HOME-MIXING OF FERTILIZERS

The past fifty years have witnessed the rise and development of an important fertilizer industry in the United States. During this time there has been not only an increase in the consumption of fertilizers, but also marked progress in methods of manufacture and the introduction of new materials. It is estimated that in the last three or four decades the increase in the consumption of commercial fertilizers, in the United States has been at the rate of 7½ per cent per annum.

By far the greatest growth has been in that part of the fertilizer industry which deals with the manufacture of mixed fertilizers. Very many brands of such mixed fertilizers are manufactured and sold in different parts of this country. Certain advantages are claimed for the factory-mixed product. It is pointed out that the extensive use of labor-saving machinery not only permits more economical handling and mixing, but provides a product more uniform in quality. It is pointed out also that the manufacturer of mixed fertilizers is able to utilize low-grade products and, by suitable treatment, transform them into sources of readily available plantfood. It is also true that the fertilizer manufacturers help in many localities to finance the farmer by extending credit to him for periods of varying length—some times for as long as six months or more.

On the other hand, it is claimed that, because of the wide variation in the fertility requirements of different fields, it is next to impossible for the manufacturer to anticipate the needs of different farms. On the same farm there may be fields that have received applications of manure, that have had clover or other legumes in the rotation, that have been in sod for a few years or many years, that have been summer fallowed, limed, etc. The use of a commercially prepared fertilizer does not, for these reasons, allow the most economical applications of fertilizer from field to field, nor is the farmer permitted under such conditions to learn his real needs.

The facts pointed out above have been the subject of lively discussion. The partisans of home-mixing lay much stress on its advantages, while the fertilizer manufacturers are as ready to point out the disadvantages of home-mixing and the economic gain to the farmer and to the country at large through the development of modern methods of manufacture and distribution of commercial fertilizer. Perhaps one of the most vital factors affecting home-mixing—and, for that matter—also factory-mixing—is the factor of labor. Many progressive and intelligent farmers, who are well aware of the saving that can be effected through home-mixing, often prefer to purchase factory-mixed goods for the very good reason that the labor resources of the farm will not stand the entire burden at the time of the year when the fitting of the land and the planting of crops must receive immediate attention. In a modified way, home-mixing has established itself among groups of farmers. In other words, co-operation in the purchase and mixing of fertilizer ingredients seems to appeal to many farmers as promising to provide plantfood at a lower cost and in a way most satisfactory from the standpoint of the particular locality.

A recent bulletin published by the New Hampshire Station, and entitled "Can the Farmer Mix His Own Fertilizer?" contributes some interesting facts to the subject of home-mixing. One of the points investigated by the author of the bulletin concerns the uniformity of the home-mixed material as compared with factory-mixed material. In response to a request made by the New Hampshire Station to farmers who were known to practice home-mixing, 21 samples of home-mixed fertilizers were sent in. Information came with these samples as to the ingredients and proportions of ingredients used by the farmers in the preparation of the home-mixtures. The samples were analyzed and the proportions of plantfood were compared with its quality. It is the conclusion of the author of the bulletin that "a comparison of the average amounts of plantfood guaranteed with the average amounts found in 34 samples of complete factory-mixed fertilizers which were collected in the state last season shows variations almost as wide as those found with the home-mixed goods." The author thinks, further, that "while no one who is familiar with the machinery and methods of mixing used in the farmer can mix his goods with the same thoroness and uniformity as the manufacturer can, it is nevertheless true, according to the results herewith presented, that the farmer with only a shovel, a broom, a tamper and sand screen can do a pretty fair job." It may be assumed, in view of the above, that, whatever the other arguments that may be given for or against home-mixing, the question of uniformity should not receive undue weight.

DISPOSAL OF A BUMPER APPLE CROP

When the subject of instituting a campaign of publicity to arouse public interest in a food commodity is considered from all angles it is usually acknowledged to be "up to the a modern fertilizer factory would contend that people" whether or not it will be a success.

Apples are acknowledged as "King of Fruits," and yet it takes strenuous publicity to get people's interest aroused to the buying point, to move a bumper crop. Apples are perishable, and it is perhaps well, for otherwise we might have a cumulative surplus that would put a wet blanket on needed orchard development.

Fruit growers sometimes fail to realize the significance of large crops and the responsibilities which they entail. In years of large crops of good fruit the buying public is very particular in its selections and the truth of "It pays to grade" is brought home to all with great force.

When the better grade apples have been properly packed and the late varieties stored for shipment in the winter, the problem of what to do with the large volume of sound, usable cooking apples that will not keep beyond Christmas remains for solution. Disregard the culls which, unless one is making cider, should be thrown away or fed to farm animals. Often too much of this class of fruit gets on the market to the disgust of the buying public.

Some energetic growers are starting plants of their own to make apple by-products of different kinds. These things take effort, time, and some capital, but the results have in many cases been worth while. Dried apples and apple butter are two product which can be easily made in farm factories.

(Continued on Page 9).

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Our Job is to serve our readers. Whenever and wherever we can help you, write us.—The Editors.

Hail to the Apple!

AN EFFORT to further popularize the apple was made by officially setting the first week in November as Apple Day. The apple has long been called the King of Fruits and his position has not been questioned. His good qualities, beauty and many virtues are so well known and so taken for granted that they are universally accorded and passed almost without conscious recognition. In fact, the apple has been entirely too modest for his own popularity and the best good of humanity. Tons of ink have been used in popularizing and bringing into general use many things of far less worth to the human family. Other fruits which one must learn to eat, have been pushed and extolled until they are found upon every breakfast table. But the humble apple is liked by everybody from the first. The small boy will even jeopardize his night's slumber and the comfort of his "tummy" by eating them before they are ripe. Poets have sung the praise of the apple in cider, the dumpling and the turn-over pie. Physicians have recommended them even at the risk of loss of practice. Yet, in spite of all this, their use is but a fraction of what it might or should be. Let everyone, whether it be from selfish interest, love of the apple, or the love of humanity, join in the effort to properly honor the apple by increasing its use.

Hail to the King of the Fruits!

The Waste Places

A CASUAL survey of the social field will show that many of the useful and interesting activities have become little more than "waste places," owing to the neglect they suffered during the war. Even since the war, individuals and communities have been so busy arguing politics and trying to make money that the selfish spirit has gained dominion, and neighborhood interests and social activities have suffered severely. As an illustration, one thickly-settled, intelligent community discussed the advisability of discontinuing the grange recently. The interest and attendance had been lagging so long that the question arose as to the need for its continuance. However, when they came to honestly weigh the proposition their good judgment came to the rescue and the question was soon settled.

Churches, Sunday schools, clubs and all community gatherings have suffered neglect and should have the loyalty and renewed interest of everyone who believes that life is too precious to waste it all in the pursuit of business. The greatly emphasized virtues of philanthropy and brotherhood, of which we heard so much during the war, have been superseded to too great an extent by greed and selfishness and the effect has been a deterioration in the things really worth while. We need above everything else those things which will re-establish man's faith in his neighbor and show him that the things most worth while, are not procurable by money nor politics.

The League and its Fight

REPORTS FROM the New York milk field indicate that the efforts of certain manufacturers to break up the dairymens' organization are proving a boomerang. We expected as much, because the purpose was so evident in the advertising matter published and offered for publication. Dairymen realize that if the buyers should succeed in destroying their organization and thereby forcing a return to the old-time practice of making individual contracts they would also return to the old-time condition of one-sided price making. Whether producers sign the League's pooling contract or not, they should firmly refuse to enter into individual contracts and should not, under any circumstance, drop their membership in the League. This has been the advice of Pennsylvania Farmer thruout this fight and the longer it continues the more are we convinced that it is sound. We are not contending that the pooling contract is wisely conceived in all its provisions; we hold no brief for the management nor for the constitution of the League, but we do most earnestly advise the 85,000 members of the organization to hold together and preserve their only chance of having a voice in making the price of their products. If there are changes needed in their fundamental laws, or in the management of the organization, let the members go to work in the right way and make such changes as are needed.

Exports and Credits

FEW PEOPLE have stopped to figure out the question as to who is financing the immense export business which this country has carried on with Europe the past two years. How business carried on with foreign countries, how debts are paid, how debits and credits are balanced, all these questions are vital and are given little attention by the average producer of export goods—and especially is this true of the farmer. Just now we are face to face with a serious problem and it is time the people began to understand something of the subject.

Let us take for illustration two neighboring farmers, Farmer Smith and Farmer Brown, who have considerable dealings with each other during the year. They exchange work, products, buy and sell, and in the course of a year their accounts amount to several hundred dollars. Each keeps books and debits and credits himself as the occasion demands. It is seldom that much money is exchanged between them because one account usually about balances the other. However, at the end of the year they bring their books together and "settle." But suppose that another neighbor, Farmer Green, does not own his farm and does not have anything to sell to Farmer Smith. Smith, to make himself safe, would demand cash for what he sold Green, or else he would insist that Green get some one to act as security for him.

The same business principles are applied in business between nations. The bills for exports and import between nations are checked and balanced with each other, thru the banks and clearing houses, so that money is exchanged only to pay the difference at settlement, and this is payable in gold. Up to the Great War, ours was a debtor nation. That is, we owed more at settlement than was owed to us, so we made shipments of gold to Europe with great regularity. During the war, and since, all this has been changed. We have exported goods amounting to many times our imports, the balance of trade is greatly in our favor and all the leading nations owe us immense sums.

Many of those nations are in the position of Farmer Green referred to above. They have mortgaged their resources to the limit and have no cash with which to pay for what they want. Yet, we have been doing a big business with them ever since the armistice was signed and their needs are still great. Who was their "security?"

After the armistice was signed the Government of the United States financed the export trade to the extent of $2,500,000,000, but so great was the demand for goods that this sum lasted only a few months. The Government decided not to continue its philanthropic work in this direction and the question arose as to how trade was to be financed. The banks became alarmed and refused to buy and hold much foreign paper, but our exporters, eager to continue reaping rich profits, allowed foreigners to pay for goods in their own currency and carried these payments in the form of foreign bank balances. In this way, huge trade debts were piled up, reaching probably three billion dollars. Since the business was done thru banks the banks are primarily and the exporting firms secondarily responsible for these debts. In other words, this country has been going its own security. We have been doing business just as Farmer Smith would do if he sold Farmer Green a large bill at high prices without cash or backing.

This kind of business has worked harm in two directions: First, it has tended to inflate and finally exhaust our banking credit because exporters had to back up their foreign business with their local banks; second, the large export trade has helped keep prices up without a corresponding return in ready payments, or even a certainty of final settlement at all.

It would be impossible to say how long this would have continued had there not come a break in prices. Such a break has come, however, and it is slowly working a cure of the abnormal credit conditions of the world. A lowering of commodity prices and a re-establishing of normal credit conditions and processes is the only cure for the world's diseased finances. Yet, in spite of the necessity for saner methods, some of our people are clamoring for a continuance of the mistaken policy and are demanding that the government shall underwrite exports and thus become security for certain classes of producers. We do not believe that the honest, sober thinking people will approve such demands once they understand that it only helps to continue a diseased condition in trade and international credits.

Our Washington Letter

At their annual meeting in Washington, the members of the American Bankers' Association devoted much attention to the problems in which the farmers and bankers are mutually interested. In answer to a plea for larger salaries for Department of Agriculture employes, in which it was stated that more than 8,000 members of the department's regular staff resigned last year in order to accept other employment at better pay, a movement was started by the bankers for the purpose of aiding the department to secure from Congress favorable action in regard to salary increases.

* * *

Joseph Hirsch, chairman of the agricultural commission of the American Bankers' Association, urged the banks to aid the farmers in financing co-operative warehousing and selling organizations. "Many of us, I know, have been fearful of entering the field of marketing," Mr. Hirsch said, "because we have been afraid that in doing this we would come into conflict with our customers, the middlemen, who are buying the farmers' products. But it is high time for the bankers of the country to realize that unless farmers can produce and sell their crops with some reasonable assurance of a fair profit there will be an increasing tide of men drifting from the farms into the cities.

"The greatest use of the facilities of the Federal Farm Land bank system should continue to be studied and encouraged by bankers, for the proper use of these facilities will not only greatly assist in the development of our country but will release funds now employed by rural banks which may well be used for some of the purposes set forth above. In the campaign to decrease farm tenancy by encouraging the sale of farm lands to worthy tenant farmers and in the effort to make permanent home owners out of tenant farmers an opportunity for real service is offered country bankers."

Preliminary steps were taken at the convention to organize a $12,000,000 crop export financing corporation to meet the present situation. The corporation will be formed under the Edge act and start operations with a paid in capital and surplus of $6,000,000. The corporation will primarily handle the cotton crop, but contemplates financing other farm commodities. The plans provide for stock subscriptions on the basis of $1 a bale on cotton produced and the payment down of half of the amount, or $6,000,000 of the incorporated capital. Under the Edge act such corporations are permitted to handle trade acceptances or purchasers acceptances to the extent of

ten times the paid-in capital, which would enable the corporation to deal in such commercial obligations to upwards of $60,000,000. This is interesting to Northern readers to the extent of furnishing a suggestion for the working out a similar plan adapted to their own conditions and needs.

Secretary of the Treasury Houston made another declaration on the price deflation movement, in which he said: "Scarcely had the tendency toward a reduction of the cost of living manifested itself when counter forces began to operate. Resistance on the part of the producer was immediately manifested. Every producer is willing for the products of every other producer to fall, but protests the decline of his own. The first impulse of many who are searching for a way out is to turn to the government, and especially to the Treasury. This attitude is unwholesome and menacing and it is of the highest importance that individuals and committees return to a normal degree of self help and self reliance. Producers whose products cannot be satisfactorily marketed and whose prices are falling, are demanding that the Treasury intervene. They ask either that it deposit money in certain sections or that the activity of the war finance corporation be resumed. Neither of these things is feasible. It is unreasonable to expect that this government can control a world-wide movement of prices.

The American Association of Joint Stock Land banks held its annual convention in Washington, while the American Bankers' Association was in session here. It may be interesting to note that the Farm Mortgage bankers held their meeting at Kansas City in September, the tone of the two meetings being widely different. The Farm Mortgage bankers discussed ways and means for putting the Farm Loan act out of business, overlooking the needs of agriculture, while the Joint Stock Land Banks Association discussed methods of supplying the farmers money at low rates and on convenient terms.

At the annual dinner of the association State Senator Allen of Iowa spoke of the absurdity of this great rich nation living from hand to mouth, from year to year. He believed the nation should keep a year's food supply on hand at all times. His remedy for present conditions provided for the farmers establishing warehouses of sufficient capacity to store an entire year's crop of grain, so that it would not be necessary to dump it all onto the market at one time, but so it would be marketed in an orderly way. Mr. Allen did not propose that the farmers themselves organize co-operative associations and build them. And Mr. Allen said it was a service which the joint stock land banks should perform to help the farmers in their co-operative movements and make it possible for them to get the money with which to build warehouses. He has already started such a movement in his own county in Iowa.

The keystone of the meeting was to be found in placards which hung on the wall and read: "The Farm Loan act has come to stay." "The Long term amortized loan has come to stay." "The Farm Loan bond as a standard form of liquid security has come to stay." "The Joint Stock Land Bank has come to stay." "The Federal Land Bank has come to stay." At the meeting there were such men as Judge Charles E. Lobdell, farm loan commissioner; W. H. Joyce, secretary Farm Loan board; John Lee Coulter, dean West Virginia Agricultural College, and the Washington representatives of the farmers' organizations.

The Joint Stock Land banks meeting was one of considerable importance to the farmers. Though it represented only one branch of the Farm Loan system, it voiced the general hopefulness of all the banks, both joint stock and Federal land banks operating under the Farm Loan act.

Only a few days before the meeting opened the Farm Loan case had been reargued in Supreme Court, and it was the general feeling of all who heard the argument that the court will uphold the constitutionality of the act. Almost half a billion dollars, the exact amount being $435,830,000, have been borrowed by farmers of banks operating under the Farm Loan act. These farmers were able to get all of this money without paying a single dollar in commissions. Nearly all of this amount was lent at rates of interest of five and 5½ per cent., and none of it was lent for more than six per cent. If the Supreme Court upholds the constitutionality of the act farmers will again have access to these banks and will be able to get long term loans at low rates of interest and without commissions. Of the amount loaned under the act, $80,000,000 was supplied to farmers by joint stock land banks and $355,000,000 by Federal land banks.

The chief difference between the Joint Stock land banks and Federal land banks is found in the plan of borrowing. The farmer may borrow direct of a Joint Stock land bank while he joins a co-operative farm loan association to borrow money from a Federal land bank.

Speaking of the Farm Loan act, in a paper read before the meeting, Frank G. Odell, of Kansas said that "the men and interests opposing the operations of this beneficent law are doing nothing more than trying to recover a profitable business for their own personal gain. If they care at all for the business well being of the farmer and of the nation, it is secondary to their own personal business well being. They will continue to try to befuddle the minds of Congressmen and Senators, they will continue to mislead the press; they will do any conceivable thing which will play their game if they can only get control again of the business which Congress in its wisdom took away from them. The farmer himself is not well informed as to the gravity of the situation with reference to the attacks on the Federal Farm Loan system. He needs to be informed by the friends of the system and not by its self interested enemies."—E. E. Reynolds.

HARRISBURG LETTER

School Consolidations.—In the last few days the State Department of Public Instruction has announced school consolidations of a notable character in Franklin, Chester, Bedford and other counties of Pensylvania. In each instance the mergers of the schools were effected by visits by Dr. L. L. Driver, the chief of the bureau of rural education, and there will be a saving in teachers and buildings. Three of the projects will call for erection of school buildings on plots from five to eight acres in extent and in two instances high schools will be advanced to vocational schools. There will be transportation and other requirements, but it is contended by the State officials that the improved results will fully meet that expense, while there will be an actual saving thru consolidation. State officials have found such schools to do much better work.

Talking Legislation.—People are commencing to talk legislation now that the men sit in the general assembly meeting in January have been elected. It is apparent that the educational demands are going to call for millions more, probably between $40,000,000 and $50,000,000 for two years, while there will be large calls for funds for highways and health matters. In the next few weeks Secretary of Agriculture Fred Rasmussen will begin compiling the budget under the terms of the act of 1919 and it is going to take considerable support from the agricultural and allied bodies, and the farmers at large, to secure the money needed for extension of the departmental projects and supervision over and against the influences that will seek continuance of the charitable appropriations. The secretary will ask items which have not been in appropriation bills before and will speak at the meetings here in January on what must be done.

Apple Week.—Even if Apple Week does not succeed in getting the greater part of the surplus crop into the attics and cellars of the housekeepers of Pennsylvania for eating in the winter time, as our grandfathers used to do, it has started popular interest in the direction of the apple industry of the State. Newspapers gave space to apple week in the midst of the campaign and it is remarkable the letters which have come to the people wanting to know how they can secure apples which they did not know were obtainable in such variety and quantity in their own state.

Lancaster Still Leads.—The county report on production of wheat and other grains shows Lancaster is still the leader in wheat and that Berks and Erie hold their own in rye and oats. Five counties are in the "million bushel" wheat class again, but the most astonishing thing about the report is that the county range of average production per acre is widely different. It runs from 8 to 23 bushels. Lancaster has over twenty-two, while York, which ranks next, shows 16½ bushels, Cumberland over 19 and Franklin 17½ bushels.

Must Show Licenses.—State Game and Agricultural authorities have started vigorously after hunters and dog owners who have been going into the woods and fields without displaying licenses either on their arms or the collars of their dogs. Arrests of a number of hunters who failed to show their arm tags, altho they had paid their licenses have been reported and there has been cold comfort for owners of dogs which were shot at on lands on which they were trotting about without their owners having put on their collars. The law provides that where a dog's license is not placed on the collar the animal is to all intents and purposes unlicensed.

Petition for Vacations.—Considerable attention has been directed to the action of Cumberland Valley farmers who have organized and engaged attorneys to petition the school boards of their districts to allow children to remain out of school for from two to four weeks to help in the harvest work and about the farms. It is represented that farm labor is unobtainable and unless the children are permitted to help there will be a loss of foodstuffs which can ill be spared. Just what the boards are going to do about it is not stated, but the situation in the Cumberland valley is typical of other parts of Pennsylvania.—Hamilton, Harrisburg, Nov. 1, 1920.

NEW YORK LETTER

New Milk Strike.—The liquid milk dealers of the state are trying to force the dairymen into a hole by refusing to buy November milk at the price asked. This is $3.65 per cwt. of 3 per cent milk, or the same accepted in October, though it was then nearly a cent a quart below cost of production. Costs increase in November, yet the Dairymen's League did not increase its wholesale price, in deference to conditions. The milk dealers thought the dairymen had their hands more than full with the milk thrown back on them by the manufacturers in October and that they could wrest a victory at this time. The League officials to a man are standing firm, as agents of the members, and milk not contracted for at $3.65 on November 1 will be withheld. Bordens have submitted a list of 32 receiving stations to be closed November 1 if the price is maintained. Other concerns announce the same plan. The American Farm Bureau Federation has signified its willingness to help Eastern dairymen in establishing co-operative plants to care for their product.

Dairymen Preparing.—Sherburn dairymen have installed a separator having a capacity of 6000 lbs. of milk per hour in preparation of the November 1 emergency. Others are following the example as fast as possible.

State-wide Conference.—The agents of the Farm Bureaus and Home Bureaus of the State have spent the week in Ithaca and will be there part of next week preparing the line of work to be done next year, that there may be harmony of effort all over the state. Both branches of the work are growing very rapidly. Farmers and their wives see in these agencies their only means of expression of better living and of better production. Not the least of the value of the Farm Bureau work is that of teaching better marketing methods, which work deserves the most attention today of any.

Market for Dairy Cows.—A leading dealer of Cortland County, one of the chief dairy counties, says he can buy all the fine grade yearling heifers he wants at $17 each; of purebred 9 to 12 months old heifer calves at $40; of young purebred heifer calves at $20; of young purebred bull calves at $10; while good cows coming fresh at once can be had at $60 up to $100 for an extra good one. This means a loss of over a million dollars to the dairymen of that county alone. Multiply this by the number of the dairy counties of the whole east and it will be conceded as all dairymen declare, that never since dairying came to be a recognized industry has there been such a calamity. Farmers are gritting their teeth and vowing vengeance at the polls, now and hereafter.

Cost of Enforcement.—A noted state official says it is costing New York state over 50 million dollars a year to enforce the state laws by state, city and county police officials. The Federal Government is spending but $5,000,000 a year for the same purpose, and is getting better results. Our officials, our police, are not doing what they are put into office to do, but are rather closing their eyes to crime. Not new laws but new officials who will enforce, are needed.

Weather Still Good.—October is going out as remarkably mild as ever. The potato harvest is being rushed, against the day of hard frosts and snow of which none have as yet appeared. Some cabbage has been going out at $8 a ton for late varieties. But shipments are being suspended, as the weather is too warm. Pasture have held good later than usual, a thing much needed, with dairy conditions as they are and hay and other forage so scarce.

Farms Selling.—Farms are still selling freely to Western buyers and are holding firm in prices as it is believed that the unnatural dairy conditions cannot last many months with the vigorous means being used by the Dairymen's League. And that when once righted dairying will be on a firmer and better basis than ever. The slaughter of cows and calves alone insure better times ahead, when once this gale is weathered. Election is at hand and a change for better general conditions is fervently hoped for.

NEW JERSEY NEWS

Peat Industry Increases.—The peat industry has grown slightly in New Jersey during the past year. This industry in which this State leads all others, had its most rapid growth during the world war, and its continued growth in 1919 is significant as an indication of its establishment on a permanent basis. Native peat is a dark brown or black substance consisting chiefly of decayed vegetation and water. When dried it is used very widely in Europe as a fuel where coal is scarce, but, in this country, it is used principally as fertilizer for special purposes, and as a filler for certain commercial fertilizers, because of its nitrogen content. It is also used to a less degree for packing and for medicinal purposes and in the manufacture of stock food.

Sand and Gravel Yield.—The value of sand and gravel produced in New Jersey in 1919 exceeded that of any other year. The quantity production was also greater than during the preceding year, but has been exceeded in the past when prices were lower. Last year, 3,710,226 short tons of both materials sold for $2,576,272, while in the preceding year 3,579,862 short tons brought $2,462,864. Sand was the principal product, being 2,794,627 short tons valued at $2,013,222. This total includes sand for building, molding, glass making, cutting and grinding, paving and road making and other uses.

Gipsy Moth Campaign.—A gipsy moth infestation found in the summer of 1919 on the Duke Estate in Somerset County is said to be of a most serious character, and a force of scouts operating under the authority of the United States Bureau of Entomology has found that energetic steps must be taken at once if the pest is to be stamped out in New Jersey. The insects are now known to be distributed over something more than one hundred square miles, while isolated infestations have been discovered outside of the central area.—Kelly, Trenton, November 1

70° WARMTH GUARANTEED IN COLDEST WEATHER

Here is *Comfort Guaranteed*—your whole house (every room) warm as you want it in coldest weather.

When you buy a CaloriC Pipeless Furnace you get a written Money-back Guarantee that it must "heat your home to 70 degrees in coldest weather."

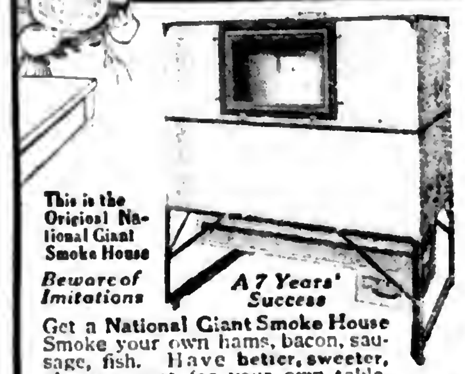
CaloriC engineers made pipeless heating a success—and their unequalled service in determining correct installation is the most practical guarantee you can have of satisfactory heating.

Saves ⅓ to ½ the fuel Now heating over 100,000 homes more comfortably and at less cost than they were ever heated before. For old or new homes. *No expensive installation.* No plumbing—no pipes to freeze. Made by largest manufacturers of warm-air furnaces in world. Decide now for *CaloriC Guaranteed Comfort* this winter.

Write for book and names of users near you—or see nearest dealer.

THE MONITOR STOVE COMPANY
(The Monitor Family)
101 Years in Business
128 Woodrow St., Cincinnati, O.
[illegible] Bush Terminal Sales Bldg., New York, N. Y.

CALORIC
THE ORIGINAL PIPELESS FURNACE TRIPLE-CASING PATENT
© The M S Co 1920



Your Own Meat Supply at Less Than Half Butchers —Prices—

This is the Original National Giant Smoke House
Beware of Imitations
A 7 Years' Success

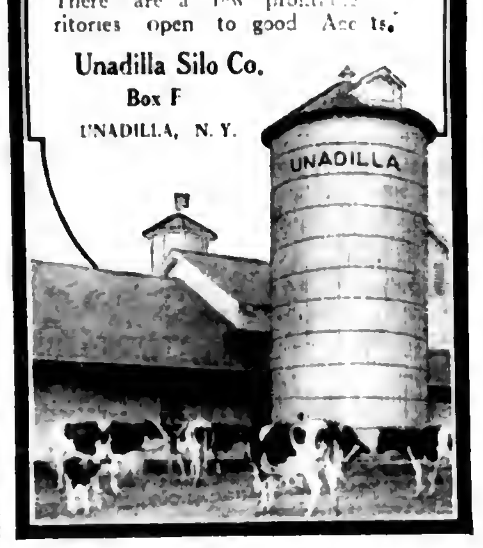
Get a National Giant Smoke House
Smoke your own hams, bacon, sausage, fish. Have better, sweeter, cheaper meat for your own table, same as thousands of other good farmers. This wonderful smoke house is portable. Operated in or out doors. Runs on sawdust, cobs, a little bark for seasoning. Investigate.

NATIONAL GIANT PORTABLE SMOKE HOUSE AND SANITARY STORE HOUSE

After smoking meats, use for Store House. Absolutely bug and mite proof. Keeps meat without sacking. Worth its price many times over—for this storage feature alone. Made in 3 sizes. Fireproof. Guaranteed.

Get FREE BOOK Tells when to butcher, how smoke house operates, etc. Gives prize-winning recipes for curing Hams, Bacon, Sausages and Fish at home. Write for book, get low prices today SURE!

PORTABLE ELEVATOR MFG. CO.
254 McClun St., Bloomington, Ill.



The Unadilla Majority

UNADILLA Silos win favor every year with a majority of dairymen and stockmen. More than twice as many Unadillas are chosen each year in the east than are those of its nearest rival.

There must be good reasons for this. There are The big Unadilla catalog gives them all.

Write for a copy today and get our special discount offer on early orders.

There are a few profitable territories open to good Agents.

Unadilla Silo Co.
Box F
UNADILLA, N. Y.

Largest Auto Wreckers in Pennsylvania
NEW AND USED PARTS FOR ALL CARS
At a discount of 30 to 75%
Mail orders promptly attended to.
Overland and Studebaker parts a specialty.
GREENE AUTO & PARTS CO.,
261 N. River Street, Wilkes-Barre, Pa.

SAY you saw the advertisement in Pennsylvania Farmer when you are writing to our advertisers.

Clean Cows Mean Clean Milk

Long, thick hair on your stabled cows catches dirt and filth. The most careful milker can't keep it out of the milk pail. Clip the cows every three or four weeks on flanks and udder, makes cleaning before milking a quick, easy job. Use the Stewart No. 1 Machine—runs easily, last a lifetime. Clips horses also. Complete, only $14 at your dealer's, or send $2 and pay balance on arrival.

CHICAGO FLEXIBLE SHAFT COMPANY,
Dept. A119, 5600 Roosevelt Road, Chicago, Ill.

DAIRY

NEW YORK MILK SITUATION

It is now three weeks since some of our farmers have been left without a market for their milk. There are some who are making butter at home and others have arranged a station and are making butter in a co-operative way. This butter is being sold by the farmers, and in the city. Invariably, accounts are kept in a manner that should the pooling plan become a success they will share equally. A majority of the dairymen in my vicinity, also elsewhere, have a market for their milk at $3.65, for three per cent milk, and many of them are willing to share with the less fortunate in the distribution of the proceeds.

While this is true the pooling plan is not coming along fast enough to make it effective for October milk according to the best information available. It is doubtful whether manufacturers will buy milk more eagerly in November than in October. If farmers remain firm in the determination to uphold the League possibily the dealers may all buy, but this we farmers do not expect. It is quite likely that dairymen will remain loyal to the League in November as in October. The danger is that by offering to buy from individual farmers and refusing to buy from the League some farmers will misunderstand some of the offers and will sell and so break with the League. Then there is another danger that the pooling will come so slowly that farmers may become discouraged and so complete a deal with the buyers direct. They can get good prices in that way, but the end is not yet.

One reason why the pooling does not come more rapidly is the pooling contract must be a contract that holds or there is absolutely no reason for any contract. This contract has been represented by the dealers as a bad one for farmers and have created some mistrust of it. Immediately dairymen come to see it as it is, and consider it thoroly, they will realize that it can not be improved upon. Thousands have signed but fifty thousand is a good many signatures to get and it takes time to get them, especially where everything possible is being done to discourage the signing.

The conference board seems to be engineering the opposition but it is apparently the Nestles Food Co. that is dominating the movement. The amount of propaganda sent out and paid for is astonishing. Paid advertisements are carried in local papers as well as circulars. Evidently pooling must come.

Business men generally are opposed to pooling. There are exceptions, however. Lawyers are against it and advise accordingly, altho some of the lawyers realize that it is the plan to follow. Banks and business firms are circularized and special notes are sent the banks opposing discounts for farmers who sign. The attacks are most vicious. The localities that have signed up the most promptly are those where the leadership is most loyal and energetic. It does matter who the local officers are, but the local officers are those whom the members want usually. The county leadership is very influential also. With the proper kind of men assisting the local officers are likely to be good ones, altho there are exceptions.

One thing is evident and that is, that we are in for some hard knocks. The dealers are now organized better than ever, and will stop at nothing to accomplish their ends—Their aim is the destruction of the League.

There are a few farmers who are taking milk to dealers and selling to them without reference to the League. What we expect is there will be a drive on the first of November to buy up the milk and refuse to buy any from the League as an organization. Some business men who own farms will be the first to accept the dealers' offers. Moreover, it is quite likely to be the men who are the most prosperous who grab the offers and thus injure their neighbors, thereby causing much unrest and uncertainty.

It is not likely that dairymen will return to the old method of four or more years ago. Should these be a break in the ranks, a new beginning will be made without doubt, but we are trusting that no break will come.
—H. H. Lyons.

MILKING SHORTHORNS

The fifth volume of the Milking Shorthorn year book shows that in the herd of C. M. Kennedy & Sons, of Bradford County, Pa., there is a pure bred milking Shorthorn, Donna Lee, which completed, on April 13, a year's record as a two-year-old of 10,252 pounds of milk with 381 pounds of butterfat. This is the fifth highest production for this age of any milking Shorthorn in the United States and the third highest in milk production.

The dam of this heifer, Princess Lee, has three daughters that average over 9000 pounds of milk as two-year-olds. The interesting fact of this record is that this valuable heifer was bred by Mr. Kennedy & Sons and is a daughter of their former herd sire, Kinsella Pride, who sired many high record animals.

EASTERN DAIRY CONDITIONS STRAINED

Every New York state owner of a dairy is feeling the strain of the very critical dairy situation. One of the worst features just now is illustrated by a paragraph from one of the last dailies "The cattle (at a farm auction) brought what is regarded as an unusually big price, considering the present unsettled condition of the milk market. The 13 milch cows were sold at prices ranging from $26 to $87, making an average of $52.50, which is considered a very large price. Ten two-year-old cows brought from $39 to $62. A bull sold for $50."

Mark that, these were unusual good prices! One out of every three head of young heifers, out on hired pastures for the summer is sacrificed just to pay the summer's keep! Two extra good two-year-olds, bred to freshen in midwinter sold for $[illegible] for the two yesterday. A neighbor attended another auction on Saturday and brought home two of the best cows for $81 for the two. These animals are worth easily three times these prices in actual cost to the farmer. The farmer can't get over $25 to $50 for a beef animal of good dairy type. That is about all that is selling well and the young calves are being vealed with a vengeance, one that will be wrecked on the future of milk production in the east for a period of years.

The buyers of milk and manufacture of milk products give evidence of thoro alarm over the results of their high-handed refusal to buy any milk for manufacture at any price for at least three months. The Dairymen's League is evincing such quiet efficiency in organizing a protective plan for the herds of the east and in taking care of the milk thrown back on their hands that the dealers are sincerely alarmed.

For days past practically all of the dailies of the country have been carrying full page advertisements of the manufacturers in which they protest their innocence of profiteering on condensed milk, of not caring what became of the herds of the country. The articles ooze with bluff and buncombe in an effort to turn individual farmers away from their own organization, and to make consumers think they are innocent of transgression.

The move has raised a storm of unexpected ire from the farmers, whose insight into their methods is keen and whose memories are long. The effort to divert the steadily growing number of farmer signing the contracts to pool the sales of all milk and milk products for a pro rata division of proceeds is proving a help rather than a hindrance.

Nothing the League has ever done has met with so much opposition from dealers and other opponents of farmers as the pooling plan. Nevertheless hopes are high that by November 6 when a big state-wide meeting of dairymen is called at Watertown the desired 50,000 signatures shall have been secured in time to begin operation November 1. This meeting is expected to be one of the most important ever held by eastern dairymen. The milk pool and other vital phases of the critical situation will be gone over and startling developments are expected.

The directors of the League have voted to move the offices of the organization to Utica, to save rent, and to be nearer the farmers' activities. At least 17,000 square feet of floor space will be needed, with nearly 200 women clerks if the pooling plan is put into operation. This seems an expensive outlay. Yet it is more economical than to have the work done in scores of offices instead of in one office. Under the new plan farmers stand the expense directly. They will know exactly what it is and can act accordingly. Under the old system where the immense amount of bookkeeping is done by the dealers, the farmers and consumers paid the expense perhaps several times over, never being allowed to know just what it was.

The co-operative plants are responding to the emergency very satisfactorily. The Auburn plant is making over four tons of butter a day, besides other products. Its capacity may soon be enlarged 25 per cent. Other plants are being prepared for work besides the 14 now in operation.

There will perforce be a wholesale slaughtering of the cheaper cows, and even of horses, as it will be impossible to winter them.—M. G. F.

It is claimed that Jamestown, N. Y., is the first city in the United [illegible] to vote money to build and [illegible] a municipal [illegible] plant.

KEEPING MILK AND CREAM

When asked how the quality of cream delivered can be improved, butter makers reply, "keep cream and milk clean and keep them cool." The simplest means of following this advice is to provide a place where the requirements, cleanliness and coolness can be met. A farm milk house properly constructed solves the problem. Such a building need not be costly nor elaborately finished. The only absolute requirements are that it shall offer facilities for keeping dairy products at a low temperature and out of contaminating surroundings from the time the milk is drawn until the cream leaves the farm. A milk house which furnishes these conditions is a convenience, an economy and a necessity if a clean, wholesome product is to be sent to the creamery.

The farm milk house should be located for convenience and sanitation. About half way down the length of the barn and a few feet distant from it proves a good place. A door in the side of the barn at this point, opening from a cross alley, makes the milk house convenient for the milkers and saves time and extra walking. The distance from the barn may vary from a few feet to several feet. If the space is made large enough for a driveway between the milk house and barn, so much the better. Farther than that is not necessary.

In any case the distance and conditions of cleanliness should be such that stable odors cannot taint the milk.

The cheapest of cleansers is sunlight and care ought therefore to be taken that the milk house is not shaded by other buildings and that it is supplied with plenty of window space. There should be no cracks or crevices where filth can lodge and every part should be so constructed that it can be easily cleaned.

Concrete fills this requirement for floors. It can also often be used economically in wall construction. Where other material is used it must be smooth and tightly fitted together. A simple means of ventilation is a light, square shaft which may be closed in cold weather.

No expert labor is necessary in the construction of the farm dairy house, but a simply permanent building can be put up by anyone who has had a little experience in carpentry and concrete work.

The foundation for the walls may be made of stone, brick or concrete, and should rest on firm, solid ground below the frost line. The top should be at least one foot above ground, as that raises the sills so they are not continually damp. Underlying the floor should be a well tamped foundation of gravel or cinders. This furnishes good drainage and lessens the coldness and dampness of the concrete. The floor may be made of 1-2-4 mixture, that is, one part cement, two parts clean coarse sand, and four parts gravel or crushed rock. Finish the top of floor with 1-2 mixture, one part cement and two parts sand. The floor should be given sufficient slope to drain quickly to some outlet. Care being taken to make joints tight around the drain to prevent leakage and consequent bad odors.

A concrete cooling tank should be constructed so that running water from a well or spring may be used to keep milk and cream cool. Besides this you will need a number of hooks and clean rags, and a pair of scales for weighing the milk. R. B. Rushing, Ill.

No More COLD HOMES!

Best Heat for the FARM HOME

Simple way of heating a CELLARLESS cottage by IDEAL-Arcola Radiator-Boiler and 4 AMERICAN Radiators. Ask for catalog (free) showing open views of heating layouts of 4, 5, 6 and 7 rooms.

IDEAL-Arcola Radiator-Boiler Farm Home Heating Outfits

Any dealer will furnish in sizes to suit rooms and climatic conditions.

For Soft Coal	No. 1-B Size IDEAL-Arcola with	100 sq. ft. of Radiation	$142
	" 2-B " " " "	150 " "	176
	" 3-B " " " "	200 " "	213
	" 4-B " " " "	250 " "	251
	" 5-B " " " "	300 " "	290
For Hard Coal	No. 1-A Size IDEAL-Arcola with	135 sq. ft. of Radiation	$163
	" 2-A " " " "	200 " "	208
	" 3-A " " " "	265 " "	251
	" 4-A " " " "	330 " "	299
	" 5-A " " " "	400 " "	349

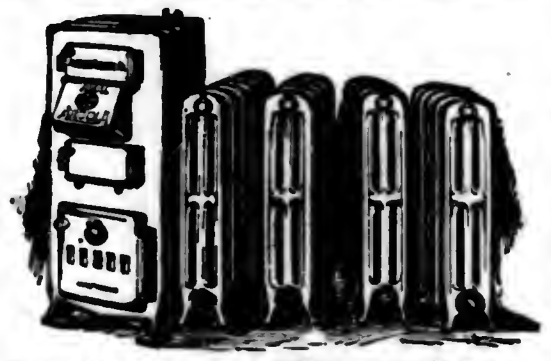
Prices include Expansion Tank and Drain Valve. Prices do not include labor, pipe and fittings used in installation and which are supplied by the local dealer at extra charge. Radiation is of regular 38-in. height 3-column AMERICAN Peerless, in sizes as needed to suit your rooms. Outfits shipped complete f. o. b. our nearest warehouse, at Boston, Providence, Worcester, Springfield (Mass.), Albany, New York, Philadelphia, Harrisburg, Pittsburgh, Baltimore, Washington, Richmond, Buffalo, Cincinnati, Indianapolis, Birmingham, Detroit, Chicago, Milwaukee, Minneapolis, St. Paul, Des Moines, or St. Louis.

Shipped complete for immediate installation

The beauty of the IDEAL-Arcola method is that no cellar is needed. Everything is on one floor. The Arcola is placed in any room that has a chimney connection. No running to cellar. Same water is used over and over again for years. No fire risk.

Buy now at present attractive prices for outfits complete!

IDEAL-Arcola outfits consist of the boiler and radiators to heat various size houses. Write us your requirements! Unlike stoves, there are no coal-gas leaks into the living-rooms. The IDEAL-Arcola delivers the soft, radiant warmth of hot water—not the dry, burnt-out atmosphere of stove heating. There is no fire risk to building—no danger to children—fire lasts for hours! The Arcola burns hard or soft coal.



The outfit consists of an IDEAL-Arcola Radiator-Boiler and 4, 5, or 6 AMERICAN Radiators and Special Expansion Tank—everything except labor, pipe and fittings, which any local dealer will supply. See table above for various sizes and prices of outfits.

Catalog showing open views of houses, with the IDEAL-Arcola Boiler in position will be mailed (free). Write today

Sold by all dealers. No exclusive agents. AMERICAN RADIATOR COMPANY Write to Department F-30 Chicago

DE LAVAL CREAM SEPARATORS

The best of all dairy investments. Save $15 to $20 per cow every year.

The De Laval Separator Co.
New York Chicago San Francisco

"Let the hair go with the hide"

Specialists in tanning Horse, Cow, Calf or any kind of hide with hair or fur on it. We make robes, coats, caps, gloves, muffs, rugs, etc., to your order. You save money and we save your furs. Free catalog of stylish fur garments. Free instructions for handling furs. Fur garments and goods of all kinds repaired and made like new.

We mount large and small game birds and fish. [illegible]

ROCHESTER FUR DRESSING CO.
655 WEST AVE.
ROCHESTER N. Y.

BARN PAINT $1.35 PER GALLON
Get factory prices on all paints. We guarantee [illegible] [illegible]
FRANKLIN COLOR WORKS
Dept. C [illegible] Franklin, Ind.

Lightning Rods EXCLUSIVE AGENCY AND QUICK SALES TO LIVE AGENTS SELLING "DIDDIE'S"—UNIVERSAL RODS [illegible] PRICES ARE RIGHT
L. D. DIDDIE CO. MARSHFIELD, WIS

where $1500 worth of vegetables per acre is not uncommon

Along the
Seaboard
the south's newest great railway.

Land which farmers have bought in Manatee County, Florida, for $30 to $50 per acre earns profits which seem fabulous. Instances are common of from $1,500 to $2,000 profits per acre. The market gardeners all count on at least $500 profit per acre.

Crops are marketed every month and they bring "hot-house" prices. Celery, lettuce, cabbage, cauliflower, tomatoes, corn, okra, onions, peas, beans, potatoes, cucumber, egg-plant, grapes and watermelons grow amazingly in the productive soil.

Oranges and Grapefruit Net $2000 per Acre

One grove near Palmetto has netted its owners $2,500 per acre. Numbers of the groves net their owners $500 or more per acre.

Write for our new booklet entitled "Orange, Grapefruit and Vegetable Growing in the Land of Manatee." It contains many pictures of the splendid schools, roads and churches—explains why Florida is the ideal place for the market gardener, fruit grower, stock farmer and poultryman.

J. M. Jones, General Development Agent
SEABOARD AIR LINE RAILWAY
Room 148, Royster Building, Norfolk, Va.

Reading Bone Fertilizer
Quality Service Satisfaction

Feeding the World: The American farmer's job. To do your utmost the land should be fed too. Stick to the old dependable when it comes to feeding the land—Reading Bone Fertilizer.

(This trade mark means quality)
Reading Bone Fertilizer Co., Reading, Pa.

Ask your dealer for Reading Bone Fertilizer.

READING BONE FERTILIZER CO.

Write for booklet and further information.

FREE—
35 Years' Experience
Packed into 80 Pages

WE have condensed 35 years' nursery and orchard experience into Harrisons' Planting Guide. It tells how to grow fancy fruit and how to pack it so as to command top prices. And it gives helpful hints for beautifying the home grounds at small cost.
Write today for this Planting Guide
HARRISONS' NURSERIES
"Largest growers of fruit trees in the world"
Box 62 Berlin, Maryland

BAKED AND GROUND OYSTER SHELL LIME
IN
100-lb. Burlap Bags
Contains Carbonate of Lime
Ammonia and Phosphoric Acid
Soil Sweetener and Fertilizer Combined
FOR ALL CROPS
Write for carload prices
CHARLES A. GREEN
1236-40 N. 9th St. Philadelphia, Pa.

MANURE
HIGH-GRADE NEW YORK STABLE MANURE
Carload shipments on Pennsylvania and Reading Railroads.
Acme Stable Manure Co.
PHILADELPHIA OFFICE, 1918 MARKET STREET

HORTICULTURE

GRADED BOX APPLES URGED AS A MEANS TO INCREASE CONSUMPTION

A publicity campaign is being conducted in New York state to encourage a greater use of apples. The co-operation of all organizations of producers, distributors and consumers is being solicited to make it a success. The campaign started with "Apple Pie Week" when the Dutchess apple came into maturity. It is expected that at opportune times other weeks will receive appropriate names.

Believing that new channels should be opened up thru which the apple crop can be marketed, the Department of Farms and Markets has been holding conferences with representatives of the large chain grocery stores in New York city. J. B. Peace and L. R. Simons of the federation marketing committee, recently attended a conference at which a majority of these stores were represented. The representatives believe their companies will be willing to co-operate in helping dispose of the apple crop on a basis which will be mutually beneficial to both producer and consumer.

The following statement by Mr. Grater, of the Atlantic and Pacific Tea Company, summarizes the ideas of the majority of the firms:

"We want small packages and have, therefore, used box apples in preference to barrels. In buying box apples we know exactly the size and number of apples and find that each apple is sound. This is not true of the New York state barreled apples. However, if the New York grower can give us apples in barrels, boxes or baskets with statement of grade, size and number of apples in container stamped on the top, the retail merchant can dispose of them to better advantage."

In order to secure the co-operation of all the growers and organizations concerned with the marketing of the 1920 New York state apple crop two conferences will be held in the near future when representatives of the chain stores will attend. Western New York growers realize that something unusual must be done to take care of the mammoth crop this season.—A. H. Pulver, New York.

SETTING APPLE ORCHARDS

No point is more important in the setting of the commercial orchard than the selection of varieties. As the thrift, bearing habits, and quality of the fruit depend largely upon the local climatic conditions, these should be carefully studied before the selection is made.

Watch how a certain variety behaves in your neighbor's orchard. This will give you an idea of its adaptability to your locality. Nearly all the desirable commercial varieties are in bearing in all localities demanded by market which do well generally on certain localities.

For South Jersey, including Burlington and counties south, Yellow Transparent, Starr, Duchess, Williams, Wealthy, Delicious, Stayman, Rome Beauty, Paragon and Winesap are usually entirely dependable, and run thru the season in order named. Grimes is also a popular variety but the tree should be doubleworked onto a hardy stock.

For Central Jersey, the same varieties are entirely adaptable except Winesap and Williams. In most sections above Camden, Winesap is too small, and not very desirable for commercial use. McIntosh can be used in this section as a variety to follow Wealthy. Gravenstein makes an excellent apple for this section. English Codlin is a very profitable apple in some localities.

For North Jersey, Red Astrachan, Duchess, Wealthy, McIntosh, Delicious, Stayman, Baldwin, Rhode Island Greening, and Rome Beauty are leaders. Wagner is also good.

A few varieties need special consideration. Johnathan is good for both South and Central Jersey, but lacks size in some sections, and blights badly. It follows Grimes and McIntosh. York Imperial, while good in some Jersey orchards, does not have the qualities of the Pennsylvania or Virginia York and is a biennial cropper. Twenty-ounce is a good green early market variety, but the tree is weak, and blights badly. However, most growers have found it profitable. King is somewhat of a shy bearer, and, unless double-worked, is weak at the collar. Northern Spy and Gravenstein, while growing well in North Jersey, are very slow about coming into bearing.

AN EASY METHOD OF BLANCHING CELERY

The common and laborious process of earthing up and winter storage of celery is doubtless a great obstacle in the way of its culture by many busy farmers. I am going to suggest this easy method of blanching, which does away altogether with the necessity of trenches or banking, at least for moderate supplies. If intended for winter blanching, about the middle of November they are taken up on a dry day and placed in water-tight troughs or other vessels in a dark cellar, the plants standing erect and closely together. Enough water is poured on the roots to cover them, and the supply is continued through the winter as it evaporates. This constitutes the entire labor. The stalks are gradually and handsomely blanched in the darkness, and many new ones spring up during the winter months, especially if the apartment is not very cold and these new shoots are remarkable for their delicacy and perfect freedom from any particle of rust, appearing like polished ivory.

Blanching is an Important Work in Producing Celery

A small separate apartment in the cellar, without windows, answers well for this purpose. Boxes, tubs, or any vessels which will hold a few inches of water may be employed. The plants as grown in the open ground, need not be earthed up at all, or they may be slightly earthed to bring them into a more compact form, if desired. Probably the best way would be to adopt the course which is sometimes employed of setting out the plants in summer on the level surface of deep, rich soil, eight or ten inches or a foot apart each way, in order that their close growth may tend to give them a more upright form. They are merely kept clean by hoeing thru the season.—Chas. A. Umoselle, Atlantic Co., N. J.

GOOD TIME TO HUNT THE APPLE BORERS

As soon as the general rush of harvesting is over, it would be well for all concerned, to get after the apple borers, if this has not already been done. The weather has been unusually propitious for such work this fall, and it is also the safest time from the viewpoint of the trees, if one does not leave the tree bases open too long to endanger them to the effects of sudden freezes before they have had time to get hardened for the winter.

A good sharp knife, sharp eyes, and a wire bent to form a short hook at the end are the really essential tools. The young borers at this time of year will be found close to the surface, and usually working downward in their burrows. This is done largely thruout their first year in the trees, and it serves the purpose of developing a loose area in the bark to hold the castings and frass developed in their deeper tunneling during the second and third years. When they start these deeper tunnels, they usually go to the upper part of their first-made burrows and dig in and continue upward usually in a fairly straight course. This permits one to get after them rather readily as a rule with a soft pliable wire as described above, and the little hook at the end will haul them out in nine cases out of ten if manipulated properly. There is certainly a lot of satisfaction in this particular kind of fishing, if one has a vital interest in the trees concerned.

The hunting of the borers at this time of year relieves one of the necessity of taking special precautions against blight infection, as should be done in the spring if hunted then. One of the largest orchardists in the state has greatly reduced the amount of collar blight in his orchards by this simple change in practice. The condition of the soil also at this season is generally much more conducive to comfort in the kneeing and elbowing usually required to do this work successfully, than is the case in the spring.—J. P. Stewart.

A farm paper offers a banner to the county which first gets rid of all scrub bulls. Several counties have claimed this banner, but when it came to a showdown, the scrubs weren't all gone.

Write down your garden plans for next summer now before you forget what you [illegible] this year.

EXPERIMENTS ON ORCHARD SOILS

As a result of twenty years of experiments on a naturally fertile soil which has received good cultivation, it seems evident that the use of commercial fertilizers is hardly justified for apple orchards on a soil of this type.

This is the statement of the Geneva Experiment Station. The station cautions, however, that results quite different from those it has obtained might be had with fertilizers on thin, unfertile soil or in sod orchards. The Geneva orchards are cleanly cultivated.

Applications of various types of fertilizers have given either inconclusive or contradictory results. This is true of the following types of fertilizer: 340 pounds an acre each year of acid phosphate; 340 pounds of acid phosphate and 196 pounds of muriate of potash; complete commercial fertilizer including 340 pounds of acid phosphate, 196 pounds of muriate of potash, and 50 pounds of readily available nitrogen; and 5.6 tons of stable manure.

The combination of acid phosphate and potash and the complete fertilizer produced small increases in yield, and possibly, a somewhat more vigorous tree growth. Stable manure and the nitrogen in the complete fertilizer did not cause any appreciable increase in yield or growth; the acid phosphate used alone was of no value.

FRUIT BRUISES ALLOW DECAY GERMS TO WORK

Careful handling of vegetables and fruits in preparation for winter storage is important. Even slight bruises on fruit will give entrance to organisms causing decay.

Temporary storage out of doors is a cool shed desirable while the cellar is being prepared to receive the fruit. Ventilating the basement on cool nights lowers the temperature.

Protection against the effects of freezing weather may be made by covering the farm storage walls with leaves, straw or cornfodder.

A temperature of 38 to 40 degrees is regarded best for vegetables in storage. Some vegetables will endure light frosts, but should not be handled when frozen.

DISPOSAL OF APPLE CROP

(Continued from Page 3).

One of the things that stand out most prominently in this apple situation is the needs for more storage facilities on the farm and in or near the commercial apple districts. Many farmers having large crops of apples and other fruits and vegetables have absolutely no place to hold them even for a few days after harvesting, but must send to market their entire crop within a very short time. This causes gluts on large markets, and just as serious losses arise from placing the keeping varieties of apples on the market months before they are actually fit for use.

Intelligent action on the part of growers to solve these production problems is the most needed factor. Farmers' problems must be solved by farmers and it takes business brains to do it. We must all quickly realize that the disposal of the products of the farm is a purely business proposition.—J. C. Gilbert, Penna. Bureau of Markets.

"Did the first frost catch you with some corn still out?"

The Western Electric Power and Light Outfit is a strong arm on any farm.

"Harvest is a time of worry and hard work to us farmers—and we don't always get the crops in either. Time is short and help can't be had. Anyway, that was my fix up till this year, when I put in a Western Electric Power and Light Outfit. Of course this outfit doesn't do any field work. But the work it does do saved so much of my time that I was able to get all my corn in before the first frost."

B. B. Griesemer

Editor's Note: *Mr. Griesemer is a farmer near Griesemerville, Berks County, Pa.*

"MAYBE you have done better in getting farmhands to work for you than I could. In recent years I've been a sort of a farmhand and choreboy rolled into one. I was so busy milking cows, grinding feed and pumping water that I couldn't get through all my work in the field.

"Not long ago I began to notice the good work done by an electric farm plant belonging to one of my neighbors. It gave all the light needed, but what I liked even better was that it was a powerful plant, built with the idea of doing a man's work.

An outfit that saves time and labor

"The name of this powerful plant was Western Electric, and because I believed it would give me the help I needed, I installed a Western Electric on my farm. The story of what it did may interest you, if you need help too and if you believe an electric outfit should supply power even more than light.

The portable motor makes churning easy

"Western Electric power milks the cows for me. There's half an hour a day saved right there. It also pumps water to my house and barn. Then I have a line shafting belted to the pulley on the engine, and belted to this shafting is a feed-mixer, fanning-mill and grindstone. I tell you, that engine can handle a lot of work. The powerful battery gives all the light needed, and it runs my wife's washing machine and pumps the water.

"So you see, Western Electric power is saving me a lot of time. When harvest came around, I was able to work about three hours more in the field every day. That is why I got all my corn safely in."

The battery lasts longer!

The reason the Western Electric battery lasts so long is that it is charged without stress or strain. As it fills, the rate of flow becomes less very gradually till the current stops by itself. This "tapering charge" means long life to the battery.

For more information about the powerful Western Electric Outfit, send a postcard for booklet PA7. The nearest distributor to you will be glad to furnish it.

With Electric power you can have running water all the time.

Western Electric distributors in your neighborhood:
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Clyde P. Groce, York, Pa.
Farm Light & Power Co., Mount Union, Pa.
J. T. Borton, Glassboro, N. J.
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Look for the 5A trade mark and avoid imitations.

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JUST send your name and address and I will send this fur scarf to you. Don't pay one penny until the fur is delivered at your door by the postman. This is a wonderful opportunity to get a $12.00 scarf for $6.98. Our price is amazingly low. Compare it with others and see for yourself.

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Every stylish woman is wearing a fur scarf with her coat, suit, dress or waist. It is appropriate for every occasion. This scarf is made of a genuine Manchurian Fox, which has long, soft, silky hair. It is a large animal shape scarf with head at one end and tail at the other. Lined throughout with an all-silk lining; also has silk ruffle around the neck. Very large and graceful. A fur of this kind will wear for years. Colors: Black, Luella Brown or Taupe Gray.

Send Now Just your name and address—no money. When the fur scarf arrives, pay the postman $6.98. We have paid the transportation charges. Wear the scarf—if you don't find it all you expect, return it and we will cheerfully refund your money at once. This is our risk, not yours. Be sure and give color. Order by No. 19.

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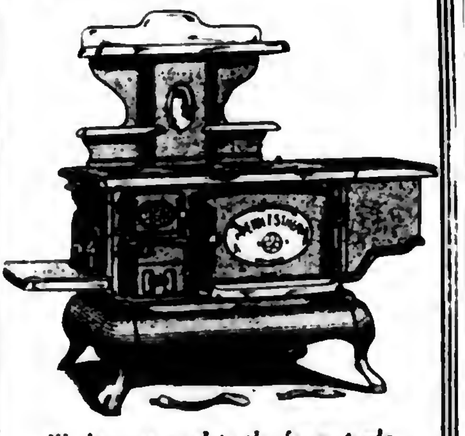
Range will meet all the requirements of the "Pennsylvania Farmer" satisfactorily.



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Use Dandelion Butter Color

Add a half-teaspoonful to each gallon of winter cream and out of your churn comes butter of golden June shade to bring you top prices.

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All stores sell 35-cent bottles, each sufficient to keep that rich, "Golden Shade" in your butter all the year round. Standard Butter Color for fifty years. Purely vegetable. Meets all food laws, State and National. Used by all large creameries. Will not color the buttermilk. Tasteless.
Wells & Richardson Co, Burlington, Vermont.

I WISH TO BUY old fashioned hand woven colored bed spreads or [illegible]

MAKING THE MOST OF MEAT

The costliest item in the housewife's food expense is meat, yet when she attempts meatless dinners the family is pretty apt to object. They miss the meat flavor, and the substitutes so often seem flat. To remedy this lack in her cooking, she must learn a lesson from the Italian and French women, who dress up the meat substitutes and other foods with that necessary flavor and the proper seasonings, and thus satisfy their men folks' idea of a good dinner.

Here are some suggestions for getting such results:

Cabbage Rolls

Mix together 1 cup chopped beef and 1-3 cup uncooked rice, add ½ teaspoon salt, ¼ teaspoon pepper and a few grains of cayenne. Cook some large whole leaves of cabbage two minutes in boiling water, dip them in cold water, and into each leaf put 2 tablespoons of the meat mixture. Fold the leaf around it, and cook 1 hour in the following tomato sauce. Serve on a hot platter with the tomato sauce poured around the rolls.

The Tomato Sauce.—Put 1 cup tomato, 1 cup water, 1 bay leaf and a sprig of parsley to cook in a covered saucepan. When the tomatoes are soft, strain them. Slice 1 onion, and brown it in 3 tablespoons of fat, and 3 tablespoons flour, and blend all well. Then add the strained tomato, ½ teaspoon salt, and ⅛ teaspoon pepper, let cook 3 minutes, stirring carefully to prevent lumping.

Hot Ham Sandwiches

Cut 6 slices of bread 1-3 inch thick, cut the slices in two, and remove the crusts. Cream ½ cup butter, beat in ½ teaspoon mixed mustard, then spread this on the bread. Press half of the slices with finely chopped ham, and press the pieces together. Beat 1 egg light, add 1 cup milk, and ½ teaspoon salt, and mix thoroly. Dip both sides of the sandwiches into this egg, and fry them in hot fat until they are brown on one side, then turn and brown on the other side. Serve hot with tomato sauce made as directed above.

Casserole of Rice and Meat

Line a well-greased mold with cold boiled rice. Fill the center with the following mixture. Season 2 cups of finely chopped cooked meat with the following mixture. Season 2 cups of finely chopped cooked meat with salt, pepper, cayenne, onion and lemon juice. Add ½ cup breadcrumbs, 1 egg slightly beaten, and enough stock or milk to moisten. Cover the meat with more of the boiled rice, cover the rice with buttered paper, and steam 45 minutes. Serve with tomato sauce.

Ragout of Beef

Cut 1 lb. beef into 1-inch cubes, and slice 1 onion thin. Put 2 tablespoons fat in a frying pan, and when hot add the meat and onion slices, and fry until brown, stirring constantly. Remove from the fire, and put the meat and fat in a large kettle; add 1 bunch of celery, 2 cups cooked tomato, ½ package spaghetti (cooked), 1 teaspoon salt, and ¼ teaspoon pepper. Let simmer 3 hours, adding hot water if necessary to keep the meat from sticking. Serve on a hot platter, and sprinkle with grated cheese (about ½ cupful) just before serving.

Stuffed Eggplant

Cut 3 small eggplants in two, and scoop out the inside, leaving the shell half an inch thick. Soak ½ cup breadcrumbs in ½ cup stock for 3 minutes, then add ½ cup cooked chicken, 2 tablespoons melted fat, 1 egg well beaten, and seasoning of salt, pepper and nutmeg to suit taste. Put this filling in the eggplant halves, sprinkle breadcrumbs over the tops, set them in a greased pan, pour in 1½ cups meat stock, and bake ½ hour in a moderate oven. Serve on a hot dish with this sauce:

The Sauce.—Put 1 tablespoon each of melted fat and of flour in a saucepan and blend well, add 1 cup of the liquid from the pan in which the eggplants were baked, and cook five minutes.

Veal Birds

Slice some thin slices of meat from a leg of veal, remove skin and fat, cut into pieces 2½ inches long by 1½ inches wide. These are the pieces for the "birds." Make a stuffing of 1 cup soft breadcrumbs, 3 tablespoons melted butter, 1 tablespoon chopped parsley, ½ teaspoon salt, ⅛ teaspoon pepper, and 1 teaspoon onion. Put 1 teaspoonful of the stuffing in the center of each piece of veal, roll the edges together, and fasten them with toothpicks; sprinkle with salt and pepper, dredge with flour and fry to a golden brown in a little hot fat. Add hot water enough to cover the meat, cover the pan and cook in a hot oven 45 minutes; then remove the cover and bake 30 minutes longer.

Beef and Oatmeal Scrapple

Select a piece of beef from the upper part of the shank in order to get the marrowfat. You will need 2 lb. of meat per 3 cups of oatmeal. Cover the meat, with the bone in it, in boiling water and cook until tender. Let stand until cold, then remove the bone and chop the meat fine. There should be three to four cups of broth left from this amount of meat. Per each 2 cups of broth, add 1 teaspoon of salt, and when the broth boils stir in the oatmeal; it should make a thick mush. Cook thoroly in double boiler or in a fireless cooker, then stir in the chopped meat, and season well with celery, salt, onion and paprika, or with poultry seasoning. Let cook over boiling water until very hot, then turn into two small bread pans. When cold, slice, dredge in cornmeal or flour, and fry in deep hot fat until brown on both sides. Serve with boiled onions or turnips and a green vegetable salad.

Stuffed Tomatoes

Wash 6 large tomatoes well, cut a slice from the stem end of each and scoop out the pulp and seeds. Make a stuffing of [illegible] cup soft breadcrumbs, ½ cup tomato pulp, ½ cup cooked ham chopped fine, ½ tablespoon chopped parsley, and ½ teaspoon salt. Sprinkle the inside of the tomatoes with salt, put in the stuffing, being careful not to pack it too tightly. Place the tomatoes in a shallow pan, and bake 30 minutes in a moderate oven.—Mrs. F. W. Stillman, Union Co., N. J.

HOW I USE BOXES

Some time ago I had an old box that just fitted into my sideboard drawer, and in it two lots of napkins fitted nicely. The box became broken, and one day I took it to a guest and asked her to mend it for me. She looked at me with a broad grin, and said: "No doubt you have a dozen good shoe boxes in the garget." It was true I had, but the habit of mending boxes that just fitted their purpose had been instilled into me in the days when good boxes were not so plenty, and so from a force of habit I wanted that particular box mended. I have a vision of a certain box that I treasured for years in the days when decorated boxes were treasures. It had on it a picture of a lady in wide skirts, who was carrying an orange. My grandmother had given it to me on one of her visits to us.

As for my modern use of boxes, I gather a lot of them and keep them to fit into my upper bureau drawers, and in them I keep a variety of things in much better order than I could ever do before I tried this scheme. It is such a delight to open my drawers and look upon the tidiness that these boxes help me to maintain therein.

From various cartons a variety of waste baskets can be made. I saw one recently that was made of a round carton. Some remnants of pink brocade silk were fastened on the outside, tinsel braid a half inch wide bound the edges, and it was lined with tight blue. This box was in the room of a young girl. In an older ladys' room, where the color scheme was lavendar, a long box was covered with a pretty lavendar shade of crepe paper, with a darker shade of the lavendar tied around the box like a ribbon, with a bow finish.

I gathered up a variety of odd cretonnes left from various curtainings and upholsterings, and made with them several nice baskets, lining them with green denim left from a couch cover.—Mrs. Lloyd R. Shaman, Juniata Co., Pa.

GET AT THE CATSUP MAKING

Old-fashioned Catsup

Boil 1 gallon of ripe tomatoes, and put them thru a colander, then boil again, adding 6 tablespoons salt. Into 1 pint of vinegar stir 3 tablespoons mustard, 1 tablespoon black pepper, ½ teaspoon each of cayenne pepper, allspice and cloves. Pour this into the boiling tomatoes, and cook until the mixture is as thick as cream, then bottle and seal by dipping the cork ends of the bottles in melted paraffin. — Helen Lyman, Mass.

Cold Catsup

Into 1½ pints vinegar stir ½ cup salt, 1 cup brown sugar, ½ cup mustard seed, 1 oz. celery seed, 1 teaspoonful each of ground cloves and mace, 2 teaspoons each of ground cinnamon and pepper, 2 or 3 onions cut into thin slices and the slices subdivided four or five times, 3 small red peppers, 4 large sweet green peppers without the seeds, and 2 roots of horseradish cut fine.

Then remove the seeds and some of the juice from ½ peck firm ripe tomatoes peeled by dipping into hot water then slipping off the skins. To get out the seeds and juice cut the tomatoes across the middle, and gently squeeze each half. Cut these tomatoes into small chunks, and put into the vinegar prepared as above. This will keep all winter without sealing. It is also a very easy way to make catsup. Of course, this catsup is "chunky" in consistency, but this is no drawback, because it is appreciated for variety.

Save the juice of the tomatoes that you squeeze out, strain out the seeds, cook and can it for making soups next winter.—Bessie Putnam, Crawford Co., Pa.

THE KNITTED TIE MAKES A WELCOME GIFT

By Jeanette Bell

It is a simple matter to select a remembrance for one's mother, sister or chum, but for the opposite sex, it is always a question to know what will please. With most things we try to make for our men folks, they consider them feminine and while they are too thoughtful to make an adverse comment, they usually smile and express thanks, throw it into some drawer or corner and leave it to be unearthed at the next housecleaning period. The popularity coupled with the high cost of the hand knitted ties, has solved this vexing problem for the knitter. Every man, old or young, will enjoy wearing a pure silk tie knitted by "her." Aside from the sentiment, the richness and beauty of a hand-made silk tie makes it a pleasure to make and to wear.

We all know how durable these ties are. In selecting the color, which is highly important, firstly take into consideration the natural choice of the future wearer. This is more important for mens' wear than for ladies, as we always wear more pronounced colors in our waists and dresses, while men's clothing is almost always somber and the one touch of brilliancy is made by the tie. Some men like only the bright shades for their neckwear, while others would absolutely refuse to wear them at all. The majority prefer a rich, dark shade whether of blue, brown, green or garnet. One can never go amiss in selecting black for a middle-aged or old man, it can be worn with either light or dark clothes, for regular everyday or special occasions and it will show the wear less than the colors. To copy the model illustrated 5 spools of knitting silk are required to make the double tie or 3 spools to make a single tie.

For the double tie, use 3 steel knitting needles, the finer the better, of two threads together cast on 52 sts on the 3 needles, knit plain for 4 rows,

5th row—* purl 4, knit 9, repeat * 3 times for this row, and continue for the next row in the same manner.

7th row—* purl 5, knit 8, repeat * 3 times for this row, continue for the next row (as each uneven numbered row will be mentioned).

9th row—* purl 6, knit 7, repeat * 3 times for this row,

11th row—* purl 3, knit 1, purl 3, knit 6, repeat *, 3 times for this row.

13th row—* purl 3 knit 2, purl 3, knit 5, repeat * 3 times for this row.

15th row—* purl 3, knit 2, purl 3, knit 4, repeat * 3 times for this row,

17th row—* purl 3, knit 4, purl 3, knit 3, repeat * 3 times for this row.

19th row—* purl 3, knit 5, purl 3, knit 2, repeat * 3 times for this row,

21st row—* purl 3, knit 6, purl 3, knit 1, repeat * 3 times for this row,

23d row—* purl 6, knit 7, repeat * 3 times for this row,

25th row—* purl 5, knit 8, repeat * 3 times for this row,

27th row—* purl 4, knit 9, repeat * 3 times for this row, continue shifting the number of knit sts, until you have made 15 inches, then * knit 4, knit 2 together, repeat *, for this row, knit 3 rows plain, * knit 3, knit 2 together, repeat *, for this row, knit 3 rows plain, then shift the work to one needle and continue decreasing until you have but a one-inch wide band, work 9 inches on this width, then increase as you decreased and continue as before for the opposite end, which is considerably shorter than the rsfit side.

A Knitted Tie

For the single tie, use 2 needles, cast on 26 sts and follow half the pattern, on the even numbered rows, knit plain instead of repeating the pattern. A single tie is made very effective by using only the plain knit. To the plain body fancy stripes of contrasting colors form very attractive ties. These are a matter of choice as to width of stripe and color combinations. The color card is so varied and the colors worn are of such striking contrasts that one's individuality asserts itself in this selection.

Ties started now will make pleasing pickup work during the summer and be ready for wear in the fall and winter.

Girls and servants are the most difficult people to handle. If you treat them familiarly, they become disrespectful; if you keep them as a distance, they resent it.

Observe a man's actions; scrutinize his motives, take note of the things that give him pleasure. How then can he hide from you what he really is?

To shirk your duty when you see it before you shows want of moral courage.

It pays to put underwear money into "HANES"

—*bigger value, longer wear and greater comfort!*

HANES
ELASTIC KNIT UNDERWEAR

FOR years "Hanes" winter underwear for men has proven itself to be the *national standard.* Its popularity extends from coast-to-coast! It wins on merit! Your confidence in every "Hanes" garment can never be misplaced. *"Hanes" guarantee proves that!*

"Hanes" underwear is made in heavy and medium winter weight union suits and heavy weight shirts and drawers. The medium weight union suit, new this year and illustrated in this advertisement, is exceptional value. It is made of full combed yarn, is silk trimmed and carries a yellow Hanes label.

"Hanes" Union Suits for boys

duplicate the men's Union Suits in important features with added fleeciness. They stand the stiffest wear and the hardest wash. Sizes 20 to 34, covering ages from 2 to 16 years. Two to four year old sizes have drop seat. Inspect these remarkable "Hanes" garments at your dealer's. If he cannot supply you, write us.

P. H. HANES KNITTING CO.
Winston-Salem, N. C.
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"We guarantee Hanes Underwear absolutely—every thread, stitch and button. We guarantee to return your money or give you a new garment if any seam breaks."

Next Summer—You'll want to wear Hanes Nainsook Union Suits!

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COFFEE
(Bean or Ground)
A Very Popular Coffee. You will enjoy its excellence and appreciate its economy.
32c lb
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Write for our big free book showing photographs, describing large assortment of sizes and designs of Steel and Cast Ranges, Cooks, Soft and Hard Coal Heaters, to select from, explaining our free trial. Send postal today.

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A "Dockash" Steel Range

will be just the thing to have in your kitchen at butchering time. For putting up the winter food supply and for all round cooking, baking, and roasting, and general kitchen service, nothing in the way of a Range can give the satisfaction of a

Dockash Steel Range

Large fire box, extra large ovens, deep ash pans and big flues, make it economical as well as perfect in operation. Have your dealer get you one of these *Dockash Steel Ranges* or let us send you a description that you may more fully understand the exceptional qualities of this range.

Name of Nearest Dealer Sent on Request

SCRANTON STOVE WORKS, Scranton, Pa.

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Rubber Footwear

Here's the Way To Make Sure You're Right!

If you want to see a man real downright happy over the rubber footwear he has bought, just ask any fellow wearing the green Snag-Proof label. He'll sure tell you that it stands for the best rubber boot, shoe or arctic you ever saw in all your life. And he'll back it up by saying he's been buying Snag-Proofs year after year—ever since he bought his first pair.

That's the reason Snag-Proofs are so popular and so successful. Every man who gets Snag-Proof footwear gets permanent satisfaction in warmth, comfort and service. He never changes.

You'll have the same experience. Look up the Snag-Proof dealer in your town. Give him a chance to satisfy you. He'll take a personal interest in pleasing you. For he has built his entire rubber footwear business on pleasing a customer so well the first time that he'll come back year after year. He wants to make a permanent friend of you—and he will if you'll go to see him. Try it.

LAMBERTVILLE RUBBER COMPANY
Lambertville, New Jersey

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STEAM CURED IN VACUUM
LOOK FOR THE GREEN LABEL

A REAL COUNTY FAIR

At Morris, Otsego County, New York, occurs a real county fair. Morris is an inland hamlet, ten miles from a railroad, of about eight hundred inhabitants. It is a fertile agricultural region where the county fair has been an annual event for more than fifty years and it still holds that sociability of the fairs of years ago. People go to see, learn and meet one another again. They carry their lunch with them and it is a sight to see them enjoying their picnic dinners.

If you are in the vicinity of Morris the week of the fair, you have to go because the movement is all turned toward Morris.

The Poultry Exhibit was in charge of Mr. Wightman. The vegetable and domestic science departments were well filled with choice articles and things that attracted a good lot of attention. The great feature of the fair was the junior project work. This work was started four years ago, thru the munificance of Dr. Morris, a wealthy man of that vicinity. He recognized the good that could come to his home community from teaching the children in terms of the lives they live and want to live, and as a result paid the salary of a young man to organize the young people into junior project work. Mr. John Lennox, who is in charge of the Juniors, works thru the schools in co-operation with the teachers.

They have their canning clubs, cooking clubs, sewing clubs, corn clubs, calf clubs, etc. The youngsters who belong to these clubs, some thirty in number, went to our state fair out at Syracuse and brought back some good winnings. Among others was the pure bred Holstein sire, Prince [illegible] Segis, whose dam has an official record of upwards of 700 lbs. of milk and 35 pounds of butter in a week.

It was interesting to hear Miss Sprague, one of the teachers, tell of her experience at the fair with these youngsters. She had never been away more than a few miles from home and your readers can realize it must have been a circus for her and it was a good education for the youngsters.

From year to year the exhibit of the junior project workers has grown rapidly and this year a large tent, a hundred feet in diameter had to be provided. It was full to overflowing with the youngsters' work. As one entered the tent the first thing was the writing contest for school students. Grades 1-3, 4-6, 7-8 and High School pupils.

Prizes were given in food, garden, animal and clothing project work, and a special prize for the best demonstrating teams.

The state fair winning teams in canning, sewing and home-making, gave daily instructive demonstrations. One of the particular features of the fair was the junior project workers floral parade lead by the Belgian Band. To see this small army of workers, produce raisers, and home-makers of our great state impressed one with its importance.

There were upwards of two hundred in line, marshalled by their teachers and if I had been one, I know I would have been a very proud person in the thought that I was aiding in a work that means so much good to the community. Their motto and insignia is a four-leaf clover with each leaf bearing the letter H—which stans for "health, hand, house and happiness."

The young lad who won the potato growing contest and a place in the cow judging was a fresh air boy from the city five years ago. He came up on the farm and liked it so well he stayed. A year ago, the man of the farm died leaving this young lad of thirteen the only man on the place. He has done the work since, cultivation and the like, and with this has taken care of this field of potatoes, [illegible] acres and obtained a wonderful yield.—H. M. Knox, New York.

Sewing Club and Instructors at Otsego County, N. Y., Fair.

PREPARING CLOSER STUBBLE FOR POTATOES

Answering a correspondent who asks what commercial fertilizer to use to supplement eight tons of manure on a clover and oats stubble in preparing it for potatoes, Dr. [illegible] man in a recent issue of the Pennsylvania Farmer, writes in part as follows:

"The experience of the most skilled potato growers in Europe and America shows that the best results in potato production are obtained where combinations of barnyard manure and commercial fertilizer or combinations of green manures and commercial fertilizers are used. The best potato growers in New Jersey and on Long Island depend almost entirely on green manures and commercial fertilizers. They use from 1500 to 2000 pounds of fertilizer containing 4 per cent of ammonia, [illegible] per cent of phosphoric acid and [illegible] per cent of potash. It has been pretty well established that well-rotted manure in moderate amounts and supplemented by commercial fertilizers make possible the largest production of potatoes."

PASSING EVENTS IN PICTURES

([illegible] & [illegible])

1—[illegible], [illegible]-year-old, political campaign manager in Virginia.
2—The King and Queen of England visit the Highland gathering at Braemar.
3—[illegible] who received [illegible] for finding [illegible] of War.
4—Jeff Davis, King of the Hoboes, visits the White House with his pet mouse.
5—The Reel Dance, One of the Highland Games at Oban.
6—Harvard's [illegible] Buell
7—Spectators at the Highland Games at Oban, Argyleshire gathering.
8—One of Poland's girl-soldiers who drove Reds from Warsaw.
9—Model of sector of [illegible] on display in Washington
10—Sergt. D. J. Welch home in [illegible], R.I. with his French war-bride.

It has the accumulated improvements of our 74 years of boot-making —the "U.S." Boot

"U. S." Boots—Reinforced where the wear is hardest. Made in all sizes and styles—Hip, Half hip, and Knee. In red, black and white

A whole line of rubber footwear for farmers—including the newest types, the "U. S." Walrus and the "U. S." Bootee

EVERY year a step forward with some added improvement—a better last, a reinforced heel or an improved process of "curing" the rubber—until today here it is with the accumulated improvements of 74 years—the U. S. Boot. Look it over!

It is trim, well shaped—the sure mark of skilled craftsmanship. It fits snugly and gives maximum comfort—for it is made on most carefully designed lasts. It is long-wearing because it is reinforced where the wear is hardest.

Reinforced where the wear is hardest

1. The Sole—Five soles in one, all of the finest rubber.
2. Back of the Heel—Every step you take puts a strain on the seam in back. At this point every U. S. Boot is reinforced with *ten thicknesses*.
3. The Toe—Has three heavy layers, a special toe-cap, and an extra sheet of highest quality rubber on the outside.
4. The "bend" in front—A boot has no lacing in front to "give" as you walk. Every step you take, the rubber bends and buckles. Six heavy thicknesses give long wear to U. S. Boots at this point.

The U. S. Boot is built layer by layer carefully and skilfully, then by our Patent Pressure process is welded into *one solid piece*.

Wear, comfort, appearance—it has them all. That's why U. S. Boots are worn by farmers everywhere.

The U. S. Boot is just one type in a complete line of rubber footwear to meet every need upon the farm.

A new kind of overshoe for farmers—the "U. S." Walrus

All the warmth and convenience of a cloth-top arctic, as watertight and easily cleaned as a rubber boot—that's the U. S. Walrus.

It's an all-rubber, buckled overshoe that you can slip on and push off in a moment. It has a warm, fleecy lining—and its smooth rubber surface is absolutely watertight. Best of all, you can clean it instantly under a faucet or at the pump while it's still on your feet. It will keep your shoes clean and the house clean, too.

A miner's rubber shoe becoming popular with farmers everywhere

U. S. Bootees give you the protection of a boot with the comfort of a shoe. They slip on over your socks like a leather shoe. You can wear them all day long in the wettest weather—your feet will stay dry and comfortable.

Other types of "U. S." footwear—built for rough service

The U. S. line of footwear has a type for every need—arctics, rubbers, "overs"—all built in the same rugged, reliable way.

They all have tough, heavy soles—special reinforcements at every point where the wear is hardest—and they're made of the highest quality rubber from our own plantations.

Ask your dealer to show you his U. S. line. Pick out the types best suited to the work you do. Every one has been designed by experts—every one is backed by over half a century of experience.

Always look for the U. S. Seal—it means solid wear and long service for your money.

"U. S." Rubbers—A wide range of models, in light and heavy styles to meet every need. Made in all sizes, for men, women, and children

"U. S." Walrus—An overshoe with an all-rubber surface that can be cleaned instantly. Warm as an arctic. Absolutely watertight. All weights and sizes—in red, black and white

"U. S." Bootees—Worn over the sock like a leather shoe. An all-rubber surface—easily washed off. Hy-Bootee, six eyelets; Lo-Bootee, four eyelets. In red, black and white

United States Rubber Company

Look for this seal US on all "U.S." Footwear

The FRICK is "An Honest-to-Goodness" Tractor---

That's the reason it bears the name FRICK
No matter what general Farm Power Work you want done the

FRICK WILL DO THE TRICK

SAVES LABOR AND TIME
IS DURABLE AND EFFICIENT
Write for Catalog, price and further information.
Immediate deliveries.

FRICK COMPANY, Inc.
347 W. Main Street, Waynesboro, Pa.

You Can Have a Nice Lawn

Having a beautiful farm lawn is simply a matter of proper fencing. The fence must be neat in appearance, and effectively bar poultry.

"Pittsburgh Perfect"
Electrically Welded Lawn Fencing

will enable you to have a lawn that will make your town cousins envious. Its close stay wires and electrically welded joints afford an exceptionally effective, strong and beautiful fence. Made in double scroll, single scroll and plain top styles, in many sizes. Write for *special lawn fence catalog.*

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LATEST OUT
Log and Tree Saw

NOW you can get the latest WITTE Arm Swing, Lever Controlled, Force Feed Log Saw for sawing up logs any size. Moves like a wheelbarrow—goes anywhere—saws up-hill, down-hill or on level. Cuts much faster than former rigs. Operated by a high power, frost-proof

WITTE 4-Cycle Engine

Costs only 25 to 50 cents a day to operate. Double the power needed for sawing logs or trees. Perfectly balanced rig. Can be used for belt work.

New WITTE Tree Saw

At low cost additional you can now get the new WITTE Tree Saw Equipment—changes Log Saw to Tree Saw. Saws down trees any size.

Send for Log and Tree Saw Catalog.

Quick Change From Log to Tree Saw

$125.00 NOW
For this Complete Log Saw
F. O. B. Kansas City, Mo.
From Pittsburgh, Pa., add $6.50

Don't buy any Log Saw, Tree Saw or Buzz Saw Outfit until you have seen the new WITTE. Lowest priced Guaranteed rig on the market. Cuts much faster than former rigs. On tests we cut 2-ft. log in 90 seconds. Tree saw cuts 'em close to the ground. Goes anywhere. We are making a special advertising price NOW—So write at once for complete description of this wonderful outfit FREE. BRANCH BUZZ SAW $23.50.

WITTE Engine Works
2043 Oakland Ave., Kansas City, Mo.
2043 Empire Bldg., Pittsburgh, Pa.

TRACTOR, MOST EFFICIENT ADDITION TO FARM EQUIPMENT

By Roy J. Wivell, Frederic Co., Md.

I am a son of a Maryland farmer living on about 280,000 acres of land in Frederick Co. near Emmitsburg, with my father and brother.

We usually plant about 100 acres of grain and 75 acres of corn, using the rest of the land for hay and pasture. We have two silos and feed about three dozen steers each year, besides keeping about 10 milk cows, 300 hens and a number of hogs.

One of the most economical and efficient pieces of machinery we have added to our farm equipment is a tractor. After studying various makes and sizes of tractors we decided on a 2 plow light weight tractor of the four wheel type which we purchased last spring. Last season we plowed and prepared about 150 acres of seed bed for corn and wheat, doing nearly all the plowing and harrowing with it, using the horse for planting. We also cut most of the grain with it, proving very satisfactory at this work, especially during the extremely hot weather of last summer. Besides this we have used it successfully to pull bushes, scrape roads, saw shingles, fire wood, etc. Last fall we aso filled our own silos and some for our neighbors. This winter we have been grinding feed for ourselves and neighbors thus having work for it winter as well as summer.

We can plow about six acres a day, and harrow or disk from 25 to 30 acres, using from 12 to 15 gallons of kerosene and one gallon of cylinder oil. I figure the tractor saves about $450 a year in horse feed, besides being able to rush the work in late seasons. Other equipment we have added in recent years which is both an economy and convenience is a water system, and manure spreader.

RURAL SCHOOLS

As yet, I haven't heard the school problem discussed from my point of view but, as both a rural mother and a rural teacher, it is of vital personal interest to me. The system in Pennsylvania may not have the defects most common to ours here in New York, but we are such near neighbors and the teachers of both states work so interchangeably that a word about our system should not come amiss across the line.

One of the latest requirements of our educational department makes compulsory four daily "physical training" periods to come in the middle of each session of school; I like progress so much that I determined to give the plan a fair trial before I criticized it, and my pupils have had the prescribed lessons at the required time, honestly and conscientiously administered. One of my boys remarked that just as he got real busy with something he always had to drop it and take "physical training." Could I honestly censure him? I could not—because I had noticed exactly the same thing during the entire term, though I had refrained from mentioning the fact. If these periods are necessary, why are they so? Explanation should be given stating that they are also considered fresh air periods chiefly allowing the room to receive extra ventilation.

I could sympathize with this phase of the situation if we were obliged to teach in close, poorly ventilated rooms, but here in the country there is no excuse for ever being short of pure air. I cannot ignore the justice in the criticism of some of my school patrons that regulations issuing from cities often lack knowledge of country conditions. If I had a pupil that I believed might be injured by four 75-minute periods of indoor work consisting of alternating study and recitation periods in a well-ventilated room every day for five days, I should suggest to his parents that he be placed in a sanitarium. What is the country boy or girl supposed to be doing outside of school? I can give an account of every one of mine—they have to hurry home to assist in the various duties assigned them.

Another point that forced itself upon me quite recently was this: I had two boys in the same class, one is preparing for high school while the other is looking forward to a work certifiacte that he may work on his mother's farm. I had to separate them because the work the one must take in preparation for the coming examinations would be a dead waste of time to the farm lad and I could so successfully teach him something without which he would be handicapped as a business farmer. Should there be so clear a distinction? It hardly seems to me that for country boys and girls there should. We are promised a new syllabus this fall, for which we are all looking anxiously, but in many ways the trend of the times is not toward the improvement of rural conditions and I fear that we need not expect much. Please don't misunderstand me, this is constructive rather than destructive criticism and my only thought is to bring the facts before the public that they may more readily be remedied.

I have taught in rural schools, including the present term makes 18, and naturally I love the country boy and girl. Never having lived anywhere else I fully appreciate the problem of the farmers—my people are all farmers, and I own and occupy a five-acre fruit farm. Money comes at such a great sacrifice of energy here that we would like to receive full value from our schools, are we doing it? Seldom, nor is it the fault of the conscientious teacher. I receive $22 per week—15 years ago I taught the same school with more pupils, for $7 and it was a better job than it is today. May I hear from other teachers and mothers in the country?—E. M. A., N. Y.

THE NOLAN BILL

Editor of The Pennsylvania Farmer:

Your Washington correspondent is not alone, among the news purveyors of the land, in describing the Nolan Bill as a Single Tax measure. Such a classification is decidedly erroneous, even if it be classed as such by some who are known as Single Taxers.

The Nolan Bill merely proposes to shift a portion of land tax from the backs of manufacturers and business men onto the backs of the farmers and other useful producers, while the Single Tax Party proposes to abolish all taxation on products of labor and to take, for public use and benefit, the entire rent of land.

As proof of this, let me quote the fifth paragraph of this Party's platform, which reads: "We, therefore, demand that the full rental value of land be collected by the Government instead of all taxes, and that all buildings, implements and improvements on land, all industry, thrift and enterprise, all wages, salaries, incomes and every product of labor be entirely exempt from taxation."—Oliver McKnight.

NUMBER OF FARMS IN PENNSYLVANIA BY COUNTIES

County.	1920.	1910.
State total	202,256	219,295
Adams	3,451	3,752
Allegheny	3,972	4,985
Armstrong	3,771	4,112
Beaver	2,514	2,525
Bedford	3,462	3,627
Berks	6,089	6,953
Blair	1,626	1,865
Bradford	5,290	5,824
Bucks	5,714	6,020
Butler	5,275	5,075
Cambria	2,398	2,761
Cameron	225	328
Carbon	949	936
Center	2,295	2,608
Chester	5,508	5,666
Clarion	2,931	3,083
Clearfield	3,159	3,642
Clinton	1,065	1,268
Columbia	2,603	2,777
Crawford	6,521	7,115
Cumberland	3,115	3,043
Dauphin	2,517	2,684
Delaware	1,291	1,429
Elk	856	1,073
Erie	5,484	5,511
Fayette	3,267	3,819
Forest	416	549
Franklin	3,884	4,250
Fulton	1,350	1,424
Greene	3,168	3,282
Huntingdon	2,111	2,285
Indiana	3,935	4,459
Jefferson	2,947	3,165
Juniata	1,572	1,695
Lackawanna	1,698	1,692
Lancaster	11,306	10,835
Lawrence	2,464	2,594
Lebanon	2,372	2,525
Lehigh	2,950	3,295
Luzerne	2,965	3,216
Lycoming	3,270	3,689
McKean	1,580	1,634
Mercer	4,499	4,816
Mifflin	1,108	1,276
Monroe	1,818	2,097
Montgomery	4,840	5,166
Montour	774	849
Northampton	3,283	3,565
Northumberland	2,589	2,534
Perry	2,105	2,409
Philadelphia	423	824
Pike	691	871
Potter	3,283	3,536
Schuylkill	2,813	3,002
Snyder	1,753	1,845
Somerset	3,630	3,935
Sullivan	836	985
Susquehanna	3,526	4,329
Tioga	3,702	4,436
Union	1,411	1,455
Venango	2,369	2,793
Warren	2,353	2,820
Washington	4,482	4,733
Wayne	3,082	3,449
Westmoreland	5,593	5,512
Wyoming	1,543	1,756
York	7,818	8,460

Figures not strictly comparable, by reason of cahnge in county boundary, between 1910 and 1920.

AGRIGRAPHS

"Where are you going my pretty maid?"
"To get a sample of milk," she said,
"The boys will take it after that,
And test my cow for butter fat."

"The Farm is the best Home of the Family, the main source of National Wealth, the Foundation of civilized Society."

Uncle Ab says: I always try to keep my work in front of me; when it gets behind and begins to push me it gets me worried.

73 years old—he cuts 100 cords in 4 days

and Makes Big Money With the OTTAWA Log Saw!

Mr. G. W. Smith of Vero, Florida, whose photo is shown above is 73 years old. In a letter he says: "I cut 100 cords of pine wood in 4 days with my OTTAWA. I can make good money by having this outfit. I feel very proud of what I am doing for myself."

Mr. G. W. Smith, 73 years old, of Vero, Fla., writes: "I can truthfully say the Ottawa Log Saw is all you claim for it and even more. I cut 100 cords of pine wood in 4 days with my Ottawa."

Mr. R. T. Sims, of Carthage, Texas, and his OTTAWA Log Saw. Mr. Sims writes: "My OTTAWA is a wonder."

Mr. Arthur Martin, Three Oaks Mich., cutting up a tough sycamore with his OTTAWA.

Mr. Chris Christenson, Osage City, Kan., writes: "The Ottawa Log Saw is a great labor-saver."

YOU can make even bigger profits with the new improved OTTAWA Log Saw. With it one man cuts 35 to 50 cords a day. Saw your winter's fuel quick, and then make money cutting wood to sell. When not sawing, engine runs belt machinery. The greatest work-saver and money-maker ever invented.

New Friction Clutch lever controlled, lets you start and stop saw blade instantly while engine runs on. No dangerous swishing of saw blade in the air. Easily moved from log to log and cut to cut along the log. Be sure to send your name and address for free information. Use the coupon attached.

Beat the Coal Famine! Remember last winter! Coal is scarce now and will be harder to get. Sawed wood will bring high prices. Get an Ottawa Log Saw.

OTTAWA LOG SAW
Cuts Down Trees—Saws Logs By Power

The new improved 1921 model OTTAWA cuts much faster than other Drag or Log Saws as they are built today. 4-Cycle Frost Proof Engine. Built-in Magneto and Automatic Governor with Speed Regulator. Outfit strong but simply built.

Pulls Over 4 H-P. The OTTAWA pulls over 4 H-P and is the most powerful log saw. Plenty of power to run cream separator, sheller, etc. Starts without cranking—no batteries ever needed. Weighs less than any 8 H-P Drag Saw built. Balanced crank shaft eliminates vibration, increases power and saves fuel. Direct gear drives saw—no chains to tighten; no keys; no set screws.

Cash or Easy Payments You can get your OTTAWA now and let it pay for itself while you use it. Get our easy payment plan of purchase. Only sold direct from factory to user, at wholesale factory prices

30 Days Trial Every OTTAWA shipped on 30 days trial. Must fulfill 10-Year Ottawa Guarantee. For nearly 20 years we have been selling direct from factory to users, saving them thousands of dollars. Now over 10,000 satisfied users.

Ottawa Ships 'Em Quick Order Now and we will ship from nearest point: St. Paul Minn., Pittsburgh, Pa., Indianapolis, Ind., Atlanta, Ga., Dallas, Tex., Portland, Ore., San Francisco, Cal., Pueblo, Colo., or Ottawa, Kansas. Address all letters to the factory office, Ottawa, Kansas.

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2567 Wood St.
Ottawa, Kansas

Special Offer Now
During Coal Shortage we are making a Special Offer for immediate shipment. Send today for this Big Special Offer and Very Low Direct Factory Price.

Free Book
Send name and address on coupon and receive FREE Book and Big Special Offer on the OTTAWA Log Saw.

Get This Free Book

MAIL THIS NOW
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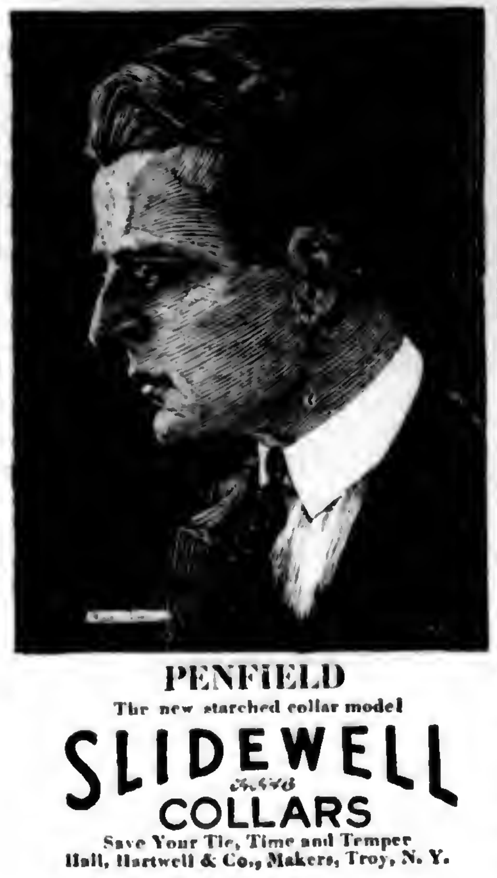
Send me your Free Book and Big Special Offer on 1921 Model OTTAWA Log Saw. It is understood I am under no obligation.
Name
P. O.
R.F.D. State

Wheels Turn On Swivel Axle
Easy to Move from Cut to Cut
Wheels Like a Barrow
Cuts Up Branches
Pat. Applied For
New Lever Controlled Clutch starts and stops saw while engine runs on.
310 Saw Cuts a Minute
Strictly a One-Man Outfit
How to Beat the Coal Shortage
Cuts Down Trees Level With Ground
Leaves No Stump
Pat. Applied For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The new starched collar model
SLIDEWELL COLLARS
Save Your Tie, Time and Temper
Hall, Hartwell & Co., Makers, Troy, N. Y.

$10,000.00 BACKS THIS SAW
As low as $19.50 For Hertzler & Zook Portable Wood Saw Frame
HERTZLER & ZOOK Portable Wood SAW
Is easy to operate. Our No. 1 is the best and cheapest saw made to which a ripping table may be attached. Guaranteed 1 year. Money refunded if not satisfactory. Write for catalog.
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Box 21 Belleville, Pa.

200 Acres Equipped $5700
$3205 Income Last Year
Beautiful, prosperous Pennsylvania farming section; all conveniences; only 2 miles RR town, [illegible] acres fields, remainder spring-watered pasture, valuable wood, timber, [illegible] oak bark, 100 apple trees, big variety fruit; excellent [illegible] house, pretty shade, [illegible] other buildings; aged owner retiring, includes 2 horses, cattle, brood sows, poultry, [illegible] tools, buckwheat, oats, wheat, corn, rye, [illegible] hay, straw, fodder, all for $5700, only $[illegible] cash, balance easy terms. Details this and equipped farm only $700 cash required Page 31 Strout's Big New Illustrated Catalog Farm Bargains 33 states. Copy free. STROUT FARM AGENCY, 1122 BE Land Title Bldg., Philadelphia, Pa.

All Size Farms, good soil for potatoes, grain, trucking; good houses and buildings; located in Middlesex, Monmouth, Mercer counties, the potato belt of N. J.
CLIFFORD G. BROWN,
CRANBURY STATION, Middlesex Co., N. J.

HAY Ship to The Old Reliable House
DANIEL McCAFFREY'S SONS
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MEAT MEAL
Manufactured From
Beef, Blood and Bone
A properly proportioned
Concentrated Ration
Better Than Tankage
For Poultry and Hogs
GUARANTEED ANALYSIS
Protein 65%
Fat 5%
Bone Phosphate of Lime 16½%
Crude Fibre (Maximum) 2%
THE FOOD TO FEED TO FORCE THE EARLY BROILER
INCREASE YOUR EGG YIELD
AND
ADD WEIGHT TO YOUR HOGS
Write For Circular and Sample
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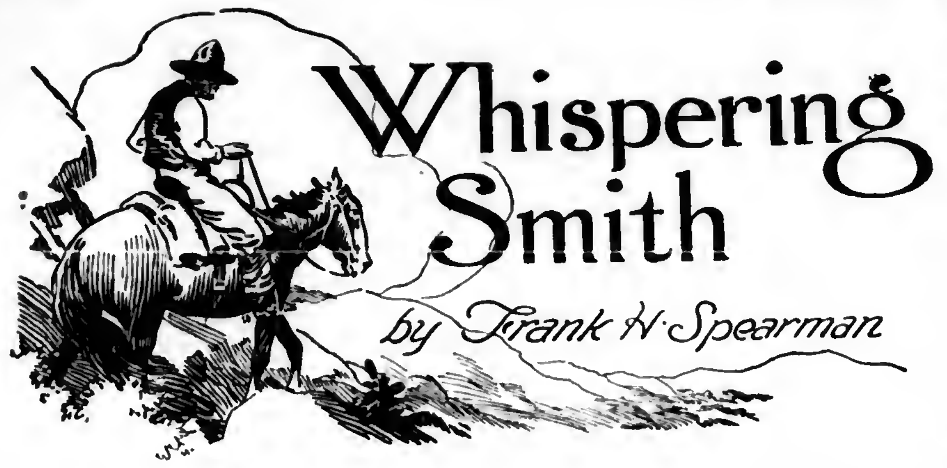

(Continued from Last Week).

CHAPTER XLIII

Crawling Stone Wash

Where the Little Crawling Stone River tears out of the Mission Mountains it has left a grayish-white gap that may be seen for many miles. This is the head of the North Crawling Stone Valley. Twenty miles to the right the big river itself bursts thru the Mission hills in the canyon known as the Box. Between the confluence of Big and Little Crawling Stone, and on the east side of Little Crawling Stone, lies a vast waste. Standing in the midst of this frightful eruption from the heart of the mountains, one sees, as far as the eye can reach, a landscape utterly forbidding. North for sixty miles lie the high chains of the Mission range, and a cuplike configuration of the mountains close to the valley affords a resting-place for the deepest snows of winter and a precipitous escape for the torrents of June. Here, when the sun reaches its summer height or a sweet-grass wind blows soft or a cloudburst above the peaks strikes the southerly face of the range, winter unfrocks in a single night. A glacier of snow melts within twenty-four hours into a torrent of lava and bursts with incredible fury from a thousand gorges.

When this happens nothing withstands. Whatever lies in the path of the flood is swept from the face of the earth. The mountains, assailed in a moment with the ferocity of a hundred storms, are ripped and torn like hills of clay. The frosted scale of the granite, the desperate root of the cedar, the poised nest of the eagle, the clutch of the crannied vine, the split and start of the mountainside, are all as one before the June thaw. At its height Little Crawling Stone with a head of forty feet, is a choking flood of rock. Mountains, torn and bleeding, vomit bowlders of thirty, sixty, a hundred tons like pebbles upon the valley. Even there they find no permanent resting-place. Each succeeding year sees them torn groaning from their beds in the wash. New masses of rock are hurled upon them, new waters lift them in fresh caprice, and the crash and the grinding echo in the hills like a roar of mountain thunder.

Where the wash covers the valley nothing lives; the fertile earth has long been buried under the mountain debris. It supports no plant life beyond the scantiest deposit of weed-plant seed, and the rocky scurf, spreading like a leprosy over many miles, scars the face of the green earth. This is the Crawling Stone wash. Exhausted by the fury of its few yearly weeks of activity, Little Crawling Stone runs for the greater part of the year a winding, shallow stream through a bed of whitened bowlders where lizards sun themselves and trout lurk in shaded pools.

When Whispering Smith and his companions were fairly started on the last day of their ride, it was toward this rift in the Mission range that the trail led them. Sinclair, with consummate cleverness, had rejoined his companions; but the attempt to get into the Cache, and his reckless ride into Medicine Bend, had reduced their chances of escape to a single outlet, and that they must find up Crawling Stone Valley. The necessity of it was spelled in every move the pursued men had made for twenty-four hours. They were riding the pick of mountain horseflesh and covering their tracks by every device known to the high country. Behind them, made prudent by unusual danger, rode the best men the mountain division could muster for the final effort to bring them to account. The fast riding of the early week had given way to the pace of caution. No trail sign was overlooked, no point of concealment directly approached, no hiding-place left unsearched.

The tension of a long day of this work was drawing to a close when the sun set and left the big wash in the shadow of the mountains. On the higher ground to the right, Kennedy and Scott were riding where they could command the gullies on the left bank itself, worming his way like a snake from point to point of concealment thru the scanty brush of the mountain-side, crawled Wickwire, commanding the pockets in the right bank. Closer to the river on the right and following the trail itself over shale and rock and between scattered bowlders, Whispering Smith, low on his horse's neck, rode slowly.

It was almost too dark to catch the slight discolorations where pebbles had been disturbed on a flat surface or the calk of a horseshoe had slipped on the uneven face of a ledge, and he had halted under an uplift to wait for Wickwire on the distant left to advance, when, half a mile below him, a horseman crossing the river rode slowly past a gap in the rocks and disappeared below the next bend. He was followed in a moment by a second rider and a third. Whispering Smith knew he had not been seen. He had flushed the game, and, wheeling his horse, rode straight up the river-bank to high round, where he could circle around widely below them. They had slipped between his line and Wickwire's, and were doubling back, following the dry bed of the stream. It was impossible to recall Kennedy and Scott without giving an alarm, but by a quick detour he could at least hold the quarry back for twenty minutes with his rifle, and in that time Kennedy and Scott could come up.

Less than half an hour of daylight remained. If the outlaws could slip down the wash and out into the Crawling Stone Valley they had every chance of getting away in the night; and if the third man should be Barney Rebstock, Whispering Smith knew that Sinclair thought only of escape. Smith alone, of their pursuers, could now intercept them, but a second hope remained; on the left, Wickwire was high enough to command every turn in the bed of the river. He might see them and could force them to cover with his rifle even at long range. Casting up the chances, Whispering Smith, riding faster over the uneven ground than anything but sheer recklessness would have prompted, hastened across the waste. His rifle lay in his hand, and he had pushed his horse to a run. A single fearful instinct crowded now upon the long strain of the week. A savage fascination burned like a fever in his veins, and he meant that they should not get away. Taking chances that would have shamed him in cooler moments, he forced his horse at the end of the long ride to within a hundred paces of the river, threw his lines, slipped like a lizard from the saddle, and, darting with incredible swiftness from rock to rock, gained the water's edge.

From up the long shadows of the wash there came the wail of an owl. From it he knew that Wickwire had seen them and was warning him, but he had anticipated the warning and stood below where the hunted men must ride. He strained his eyes over the waste of rock above. For one half-hour of daylight he would have sold, in that moment, ten years of his life. What could he do if they should secret themselves until dark between him and Wickwire? Gliding under cover of huge rocks, up the dry watercourse, he reached a spot where the floods had scooped a long, hollow curve out of a soft ledge in the bank, leaving a stretch of smooth sand on the bed of the stream. At the upper point great bowlders pushed out in the river. He could not inspect the curve from the spot he had gained without reckless exposure, but he must force the little daylight left to him. Climbing completely over the lower point, he advanced cautiously, and from behind a sheltering spur stepped out upon an overhanging table of rock and looked across the river-bottom. Three men had halted on the sand within the curve. Two lay on their rifles under the upper point, a hundred and twenty paces from Whispering Smith. The third man, Seagrue, less than fifty yards away, had got off his horse and was laying down his rifle, when the hoot-owl screech again and he looked uneasily back. They had chosen for their halt a spot easily defended, and needed only darkness to make them safe, when Smith, stepping out into plain sight, threw forward his hand.

They heard his sharp call to pitch up, and the men under the point jumped. Seagrue had not yet taken his hand from his rifle. He threw it to his shoulder. As closely together as two finger of the right hand can be struck twice in the palm of the left, two rifle-shots cracked across the wash. Two bullets passed so close in flight they might have struck. One cut the dusty hair from Smiths' temple and slit the brim of his hat above his ear; the other struck Seagrue under the left eye, ploughed thru the roof of his mouth, and, coming out below his ear, splintered the rock at his back.

The shock alone would have staggered a bullock, but Seagrue, laughing, came forward pumping his gun. Sinclair, at a hundred and twenty yards, cut instantly into the fight, and the ball from his rifle creased the alkali that crusted Whispering Smith's unshaven cheek. As he fired he sprang to cover.

For Seagrue and Smith there was no cover; for one or both it was death in the open and Seagrue, with his rifle at his cheek, walked straight into it. Taking for a moment the fire of the three guns, Whispering Smith stood, a perfect target, outlined against the sky. They whipped the dust from his coat, tore the sleeve from his wrist, and ripped the blouse collar from his neck; but he felt no bullet shock. He saw before him only the buckle of Seagrue's belt forty paces away, and sent bullet after bullet at the gleam of brass between the sights. Both men were using high-pressure guns, and the deadly shock of the lugs made Seagrue twitch and stagger. The man was dying as he walked. Smith's hand was racing with the lever, and had a cartridge jammed, the steel would have snapped like a match.

It was beyond human endurance to suport the leaden death. The little square of brass between the sights wavered. Seagrue stumbled, doubled on his knees, and staggering plunged forward on the sand. Whispering Smith threw his fire toward the bowlder behind which Sinclair and Barney Rebstock had disappeared.

Suddenly he realized that the bullets were not coming his way. He was aware of a second rifle-duel above the bend. Wickwire, worming his way down the stream, had uncovered Sinclair and young Rebstock from behind. A yell between the shots rang across the wash, and the cringing figure of a man ran out toward Whispering Smith with his hands high in the air, and pitched headlong on the ground. It was the skulker, Barney Rebstock, driven out by Wickwire's fire.

The shooting ceased. Silence fell upon the gloom of the dusk. Then came a calling between Smith and Wickwire, and a signalling of pistol-shots for their companions. Kennedy and Bob Scott dashed down toward the river-bed on their horses. Seagrue lay on his face. Young Rebstock sat with his hands around his knees on the sand. Above him at some distance, Wickwire and Smith stood before a man who leaned against the sharp cheek of the bowlder at the point. In his hands his rifle was held across his lap just as he had dropped on his knee to fire. He had never moved after he was struck. His head, drooping a little, rested against the rock, and his hat lay on the sand; his heavy beard had sunk into his chest and he kneeled in the shadow, asleep. Scott and Kennedy knew him. In the mountains there was no double for Murray Sinclair.

When he jumped behind the point to pick Whispering Smith off the ledge he had laid himself directly under Wickwire's fire across the wash. The first shot of the cowboy at two hundred yards had passed, as he knelt, thru both temples.

They laid him at Seagrue's side. The camp was made beside the dead men in the wash. "You had better not take him to Medicine Bend," said Whispering Smith, sitting late with Kennedy before the dying fire. "It would only mean that much more unpleasant talk and notoriety for her. The inquest can be held on the Frenchman. Take him to his own ranch and telegraph the folks in Wisconsin—God knows whether they will want to hear. But his mother is there yet. But if half what Barney has told tonight is true it would be better if no one ever heard."

CHAPTER XLIV

Back to the Mountains

In the cottage in Boney Street, one year later, two women were waiting. It was ten o'clock at night.

"Isn't it a shame to be disappointed like this?" complained Dicksie, pushing her hair impatiently back. "Really, poor George is worked to death. He was to be in at six o'clock, Mr. Lee said, and here it is ten, and all your beautiful dinner spoiled. Look me in the eye. Have you heard from Gordon Smith?"

"No, Dicksie."

"Not since he left the mountains a year ago?"

"Not since he left the mountains a year ago."

Dicksie, sitting forward in her chair, bent her eyes upon the fire. "It is so strange. I wonder where he is tonight. How he loves you, Marion! He told me everything when he said good-by. He made me promise not to tell then; but I didn't promise to keep it forever."

Marion smiled. "A year isnt' forever, Dicksie."

"Well, it's pretty near forever when you are in love," declared Dicksie energetically. "I know just how he felt," she went on in a quieter tone. "He felt that all the disagreeable excitement and talk we had here then bore heaviest on you. He said if he stayed in Medicine Bend the newspapers never would cease talking and people never would stop annoying you—and you know George did say they were asking to have passenger trains held here just so people could see Whispering Smith. And, Marion, think of it, he actually doesn't know yet that George and I are married! How could we notify him without knowing where he was? And he doesn't know that trains are running up the Crawling Stone Valley. Mercy! a year goes like a hour when you're in love, doesn't it? George said he knew we should hear from him within six months—and George has never yet been mistaken excepting when he said I should grow to like the railroad business—and now it is a year and no news from him." Dicksie sprang from her chair. "I am going to call up Mr. Rooney Lee and just demand my husband! I think Mr. Lee handles trains shockingly every time George tries to get home like this on Saturday nights—now don't you? And passenger trains ought to get out of the way, anyway, when a division superintendent is trying to get home. What difference does it make to a passenger, I'd like to know, whether he is a few hours less or longer in getting to California or Japan or Manila or Hongkong or Buzzard's Gulch, provided he is safe—and you know there has not been an accident on the division for a year, Marion. There's a step now. I'll bet that's George!"

The door opened and it was George.

"Oh honey!" cried Dicksie softly, waving her arms as she stood an instant before she ran to him. "But haven't I been a-waitin' for you!"

"Too bad! and, Marion," he exclaimed, turning without releasing his wife from his arms, "how can I ever make good for all this delay? Oh yes, I've had dinner. Never, for Heaven's sake, wait dinner for me! But wait, both of you, till you hear the news!"

Dicksie kept her hands on his shoulders. "You have heard from Whispering Smith!"

"I have."

"I knew it!"

"Wait till I get it straight. Mr. Bucks is here—I came in with him in his car. He has news of Whispering Smith. One of our freight-traffic men in the Puget Sound country, who has been in a hospital in Victoria, learned by the merest accident that Gordon Smith was lying in the same hospital with typhoid fever."

Marion rose swiftly. "Then the time has come, thank God, when I can do something for him; and I am going to him tonight!"

"Fine!" cried McCloud. "So am I, and that is why I'm late."

"Then I am going, too," exclaimed Dicksie solemnly.

"Do you mean it?" asked her husband. "Shall we let her, Marion? Mr. Bucks says I am to take his car and take Barnhardt, and keep the car there till I can bring Gordon back. Mr. Bucks and his secretary will ride tonight as far as Bear Dance with us, and in the morning they join Mr. Glover there." McCloud look at his watch. "If you are both going, can you be ready by twelve o'clock for the China Mail?"

"We can be ready in an hour," declared Dicksie, throwing her arm half around Marion's neck, "can't we, Marion?"

"I can be ready in thirty minutes."

"Then, by Heaven—" McCloud studied his watch.

"What is it, George?"

"We won't wait for the midnight train. We will take an engine, run special to Green River, overhaul the Coast Limited, and save a whole day."

"George, pack your suit-case—quick, dear; and you, too, Marion; suit-cases are all we can take," cried Dicksie, pushing her husband toward the bedroom. "I'll telephone Rooney Lee for an engine myself right away. Dear me, it is kind of nice, to be able to order up a train when you want one in a hurry, isn't it, Marion? Perhaps I shall come to like it if they ever make George a vice-president."

In half an hour they had joined Bucks in his car, and Bill Dancing was piling the baggage into the vestibule. Bucks was sitting down to coffee. Chairs had been provided at the table, and after the greetings, Bucks, seating Marion Sinclair at his right and Barnhardt and McCloud at his left, asked Dicksie to sit opposite and pour the coffee. "You are a railroad man's wife now and you must learn to assume responsibility."

McCloud looked apprehensive. "I am afraid she will be assuming the whole division if you encourage her too much, Mr. Bucks."

"Marrying a railroad man," continued Bucks, pursuing his own thought, "is as bad as marrying into the army; if you have your husband half the time you are lucky. Then, too, in the railroad business your husband may have to be set back when the traffic falls off. It's a little light at this moment, too. How should you take it if we had to put him on a freight train for a while, Mrs. McCloud?"

"Oh, Mr. Bucks!"

"Or suppose he should be promoted and should have to go to headquarters—some of us are getting old, you know."

"Really," Dicksie looked most demure as she filled the president's cup, "really, I often say to Mr. McCloud that I can not believe Mr. Bucks is president of this great road. He always looks to me to be the youngest man on the whole executive staff. Two lumps of sugar, Mr. Bucks?"

(Continued Next Week)

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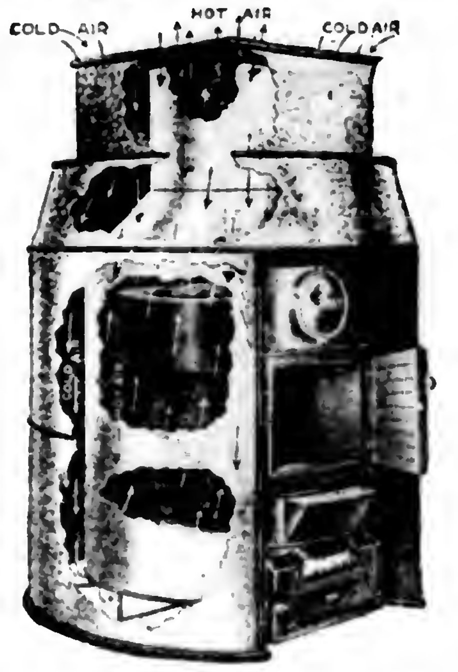

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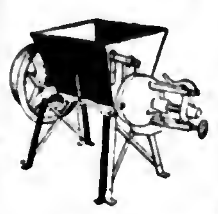

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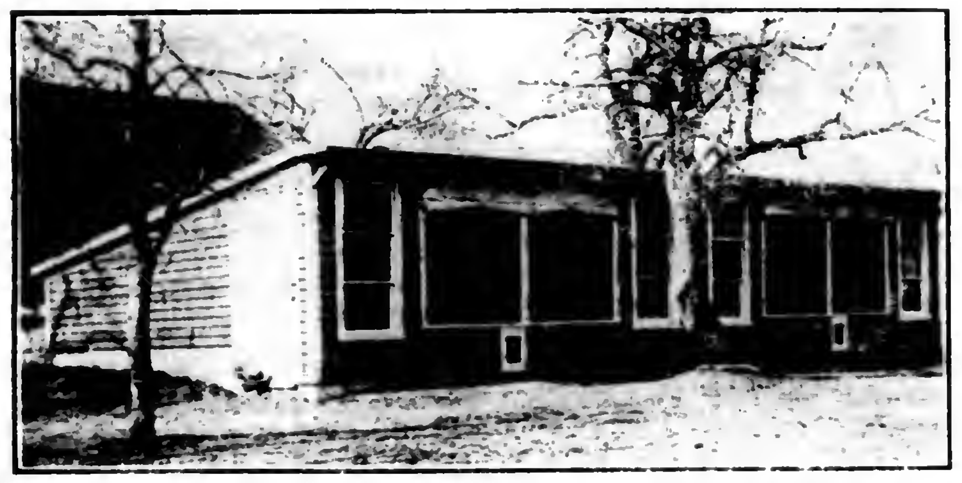
POULTRY

FEATHERS WORTH SAVING

With other poultry products feathers have taken a jump in value. At present it is worth the while of every poultryman who dresses a large number of fowls to save and market the feathers. In localities where a number of farmers keep large flocks of hens they can combine their feather shipments, which will be a convenience, as the buyers always want to get the feathers in quantities rather than in small lots.

The work of preparing the feathers for market is very complicated, because the feathers of many birds contain a strong odor, as well as a great amount of dirt, both of which must be removed if possible. Operators use an apparatus filled with hot steam in which there is machinery that stirs the feathers for several hours, at the end of which time they have been thoroly sterilized and cleaned. At least a pound of dirt is collected from every hundred pounds of feathers. The live steam has another effect, too. It loosens and expands the feathers, making them light and fluffy. In fact, the steam treatment often doubles their bulk.



One of the Laying Houses on James Hamm Farm, Carbon, Co. Pa.

Feathers are graded by an ingenious device. A fan sucks them in and shoots them out into a room thru a cylinder. The heaviest feathers fall to the floor only a short distance away, while the lightest are carried to the extreme end of the room and the intermediate grades drop in between.

Only a small amount of eiderdown is used, for it is very expensive, costing ten dollars or more a pound. The down comes from eider ducks in Iceland. It is obtained by robbing the nests which the ducks line with the soft feathers from their breasts. If this down is removed the ducks will supply a second or even a third lot from the same source. Down has a peculiar faculty of clinging closely to anything it touches, and this fact is utilized in cleaning it. Oblong frames are used, with strings stretched loosely between them. The down is thrown onto the strings, and a piece of wood drawn rapidly across the strings. The vibration throws off all gross, seawood and other impurities, but does not disturb the down.

While so-called down puffs or comforters are often advertised, most of them do not contain eiderdown, but feathers grown on more common birds. Feathers from white geese always bring the high prices. At the present time they are worth about 90 cents in the city markets. Mixed or gray goose feathers bring, on the contrary, only about 60 cents, which shows that it pays to keep the white feathers separate. Even if there is a large proportion of white feathers in a mixed shipment, the price will still be much lower. The supply of goose feathers is constantly growing less as fewer geese are being kept, but on the contrary, the supply of duck feathers is increasing, for many large duck growing plants have been established in different parts of the country. Duck feathers have one serious drawback in their odor, which is very hard to remove. Still, they constitute an item of considerable importance with the duck growers, for they sell at one dollar a pound if white. Inasmuch as a pound of feathers is yielded by every eight or ten birds, and the feathers from the duck plants are nearly always white, it pays well to save and market them.

Comparatively little work is involved in sections where the ducks are picked dry, as in New England, but where the birds are scalded, as on Long Island and in Pennsylvania, drying rooms have to be provided where the feathers can be spread out and exposed to the air until the water is removed.

Probably most of the hen feathers that reach the market are mixed as to color, so that they bring only about 10 cents a pound. When all white hen feathers can be obtained they will net twice as much. Dry picking helps to keep up the value of hen feathers, because it is harder to restore them to good condition after they have gone thru the scalding process.

Feathers are shipped to market in cotton or burlap bags. Many dealers will send bags holding 100 pounds on request. Usually the shipper pays the freight. Altho a great many poultry plants are found in the east, the greatest number of hen feathers come from the large dressing establishments in the west, sometimes being sent east by the carload, a car load containing 20,000 pounds. While large shipments are preferred, the dealers will accept feathers in smaller lots, and the money which would be received from the sale of the feathers is an item not to be overlooked by poultry farmers.—E. I. Farrington, Mass.

Who would board a hired man all winter if he didn't work? Then why board the hen that never lays an egg?

Do not unto others what you would not they should do unto you

NOVEMBER POULTRY REMINDERS

A farm with sandy soil is desirable when white breeds of poultry are owned. On such land the plumage of the hens is not visibly stained when the hens dust. The sandy soil drains rapidly after storms and this is too sandy to raise crops of green feed is not the most desirable for poultry as they seem to do the best on a grassy range.

* * *

White breeds of poultry seem more easily spotted by hawks than the darker breeds which more easily blend with the landscape. At one time we raised large flocks of white Leghorns and Barred Rocks on the same range. The few that were stolen by hawks were nearly all white birds. A half mile from the range the white dots could be easily seen in the field. But even at a shorter distance an observer could scarcely tell that there were any Barred Rocks on the farm. Near woodlands or swamps where hawks abound we would advise farmer poultrymen to select a dark breed and avoid the discouragement that comes if many of the birds are carried away by hawks.

* * *

In some sections there have been scarcely any turkeys raised during the last ten years. This has given the soil a chance to become free from the blackhead disease which has made such serious inroads on the turkey business. If healthy, vigorous breeding stock can be obtained it might now pay to raise turkeys in a section where turkeys have become practically eliminated. But be sure and buy vigorous unrelated stock even if it costs more than second class birds from doubtful flocks.

* * *

The breeder of turkeys cannot afford to go into the business on a large scale with any safety because of the blackhead disease and usually it is best to plan on a few birds for home use and a small surplus for sale if the year proves lucky. Farmers and their wives seem to have more discouragements with turkeys than with all other farm fowls combined. But the breeder who develops a nice flock is much envied by the neighbors and it is sometimes a source of satisfaction that is worth as much as the money obtained from the birds.

* * *

The guinea is a fine substitute for game birds because of the large breast and the gamy flavor. The writer once worked for a farmer who raised a large flock of White African guineas and they obtained much of their living ranging in his orchards. The meat was of fine quality and liked better than poultry by the family. They were hard to keep out of the garden but possibly cleaned up enough bugs while there to make up for the lettuce and bits of vegetables which they consumed.

* * *

A trio of guineas is enough to establish a nice little flock in one year. Their clatter is fine to drive away hawks and warn the poultryman of the approach of strangers on the farm. But we believe it is best to have them roost in a colony house rather than with the poultry. Some guineas become quite ugly and will viciously drive around the pullets and young cockerels if all are using the same laying house.—R. G. Kirby, Michigan.

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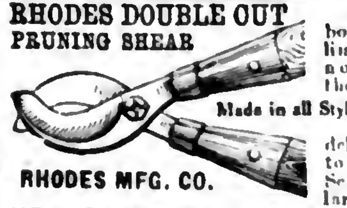

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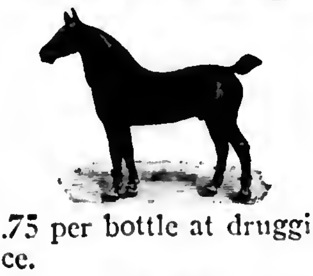

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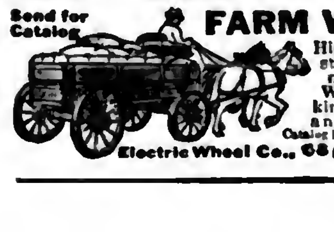

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COUNTY NOTES

Mifflin Co., Pa.—Weather has been ideal for farming all this month, cool nights and warm days without a bit of rain; not so good for cutting corn as it was too foggy and wet in the morning and too hot in the afternoon. Much corn to cut yet, and some "stocks" to seed yet. Corn is a large crop. Potatoes in most places made a large yield, but are rotting. Apples are a very large crop. Farmers do not know what to do with them. There are a number of public sales at which all stock is ready sale at good prices, except horses, which can hardly be sold. Several carloads of cows were shipped away from here and two carloads of steers shipped in. Help on the farms is so scarce that farmers can hardly get their silos filled and threshing done. Prices of grain and product at present: Wheat, $2.25; rye, $1.70; corn, old, $1.50; new, $1; oats, 60c; potatoes, $1; apples, 60@80c; butter, 60c; eggs, 60c.—J. H. Byler.

Broome Co., N. J.—As yet, no frost in the river valley, but back on the hills there has been some light frost. Apples are plentiful; picked apples sell for 50c, 75c and $1 per bushel; eggs are selling for 75c to $1 per dozen; potatoes bring $1 to $1.25 per bushel; pears, $1.25 and $1.50 a bu.; tomatoes were plentiful and very cheap.

Feed has dropped a little in price, and milch cows are selling somewhat lower than in the spring; beef cattle are away down. Fall pigs are being sold in many instances for $3 each. Some threshing has been done, silos have been filled without the corn being nipped by frost. Very little coal has been shipping, making it next to impossible to obtain any.—Cora Hamilton.

Blair Co., Pa.—The weather is fine—just like summer. We have not had a rain or frost for over two weeks. The fall seeding is about all done, but there is lots of corn to cut off yet, also some threshing to do. The farmers here are very much disappointed with the late potato crop. They are not getting half the potatoes expected. They are rotting badly, too. There are not many public sales this fall, and not many farms for sale.—H. M. McVey.

McKean Co., Pa.—Good weather all fall have had no hard frost yet, rain Sept. 30 has put springs in good shape. Crops are all fairly good, potatoes rotting some. Apples a heavy crop, were well taken care of. Potatoes, $1.50; apples, $1; butter, 70c; eggs, 75c; hay loose, $35 to $40. Short pastures have put cattle on the winter feed early. Work is in pretty good shape considering the scarcity of labor. Any one can get all the work they care to do.—R. C. Fuller.

Lebanon Co., Pa.—Fine seasonable autumn weather at present. We had our first killing frost last week. Tobacco and other crops likely to be damaged by frost were all harvested, except corn. Much of the corn is on shocks and some are starting to thresh their crops. The wheat sowing is completed in this section. Some farmers have still some potatoes to be dug. Many of the tubers, both in the field and in cellars are rotting. Corn is $1.50, milk $3 per cwt.; potatoes, $1 per bushel. Apple orchards yielded a very good crop of apples this season.—Leonard F. Strickler.

Adams Co., Ohio—A dry and hot October till the 25th when rain began and continues till today. Rain was much needed for the grass and wheat. Wheat about all sown and has made but very little growth because ground was so dry. Corn was most all cut and either put in silos or shock. Corn has cured out nicely and the fodder is nice and bright. Some clover hulled and the yield is fair. The area seeded to wheat is less than in the past two years. Much baled hay here for sale.—Walter E. Roberts.

ADVICE ON HANDLING THE APPLE CROP

Fellow Members and Fruit Growers:

In view of an estimated crop of twenty million bushels of apples for Pensylvania, and an enormous crop over the entire country, Secretary Rasmussen, of the Department of Agriculture called a meeting at Harrisburg of representatives of the International Apple Shippers' Association, dealers, retailers and members of the State Horticultural Association. It was unanimously agreed that unless something was immediately done to call the attention of the public to the situation in a way that would increase the consumption of apples there would be an enormous economic loss.

It was resolved that the merits of the apple as an article of diet should be given the widest possible publicity by way of newspapers, apple days, etc., and that the consumer be educated to buy in quantities of half bushel, bushel or barrel, instead of quarter peck.

Therefore, as officers of your association, we take the liberty of offering the following suggestions by which we, as growers, can hold up our end of the proposition:

First—It is of the utmost importance that in this of all years we put upon the market none but first-class fruit, well graded and that the top layer of every package honestly represents the entire contents.

Second—That to retain the confidence of the consumer and thereby stabilize the demand, it is important that all fruit be placed upon the market for consumption only at or near each variety season of ripeness.

Third—Keep all late apples like Ben Davis and similar late varieties in storage until towards spring, and if you do not have packages or storage facilities, resort to the good old-fashioned method of placing them in pits until next spring and be amply repaid for your efforts.

Only by observing these common sense methods of business, and also assisting every agency in the dissemination of information relative to the merits of the products of our orchards, can we hope to prevent the calamity that is staring into the face of every apple grower.

P. S. FENSTERMACHER,
President.
H. F. HERSHEY,
Secretary.

MR. W. W. WEIR ON STAFF OF SOIL IMPROVEMENT COMMITTEE

The Soil Improvement Committee takes this occasion to announce Mr. W. W. Weir, of Madison, Wis., as a member of its staff.

Mr. Weir is a native of Wisconsin. He is a graduate of the College of Agriculture of the University of Wisconsin, class of 1908, having previously attended Normal School and taught in rural schools in the state. He obtained his Master's degree from the University of Wisconsin in 1917, specializing in farm crops and soils.

TIMBER ON THE FARM

Editor Pennsylvania Farmer:

I was much interested in W. B. Greeley's article—"Timber Depletion and the Farm."

This is a subject that ought, surely to appeal to farmers everywhere, but one of which they have been singularly negligent or thoughtless.

Now when lumber prices—ditto, fencing and fuel—have gone sky-high, a part of the people at least and at last begin "to sit up and take notice" and wonder where they are, and how the situation is to be met.

To many the question is a hard one, because of the time required to raise a crop of timber, but if plans are laid right, reforesting may be made profitable within an ordinary lifetime, besides the value of the farm will be greatly enhanced by reason of the fact that a piece of growing timber will be a valuable asset.

The Department of Agriculture of the United States and of many of the states, will furnish bulletins free on application to any one interested, but many people have lands on which a second growth of trees larger or smaller are already growing that only requires ordinary care and some good judgment to produce the ground work for a fine growth of timber to meet all the needs of the farm and, perhaps a profitable surplus in a short time.

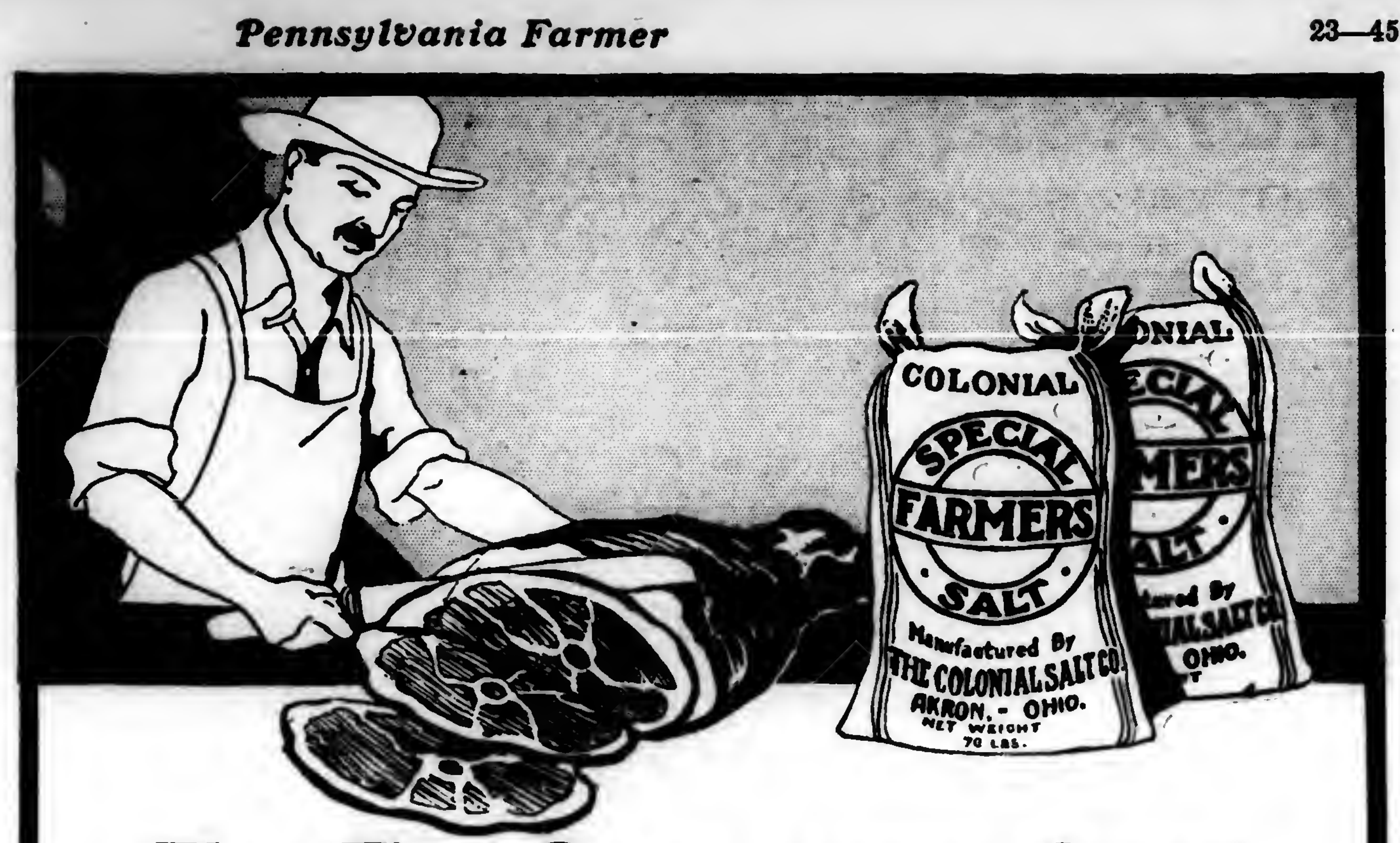
As a concrete example I will give you a little personal experience. About twenty-seven years ago, I, in company with my son, bought one hundred acres of land from which everything considered of value except a few hemlocks had been taken off about forty years ago. Some of the timber, too small to be cut at that time, to the value of several hundred dollars we have taken off since.

About twenty years ago, a neighbor being short of firewood wanted to cut some of ours, and we gave him all there was on a certain piece of ground if he would cut and pile the brush as we designed to make it into pasture. He did a good job, and fire did the same by the brush, but we did not have enough cattle to keep the brush from growing up again. We did not care much as the ground was strong. Now from three-fourths of an acre, I have just cut a year's supply of fuel (pole wood) and there is left standing about thirty-five trees, chestnut, oak, hard maple, and white ash. Of the chestnuts the majority are large enough for fence posts and some are nearly large enough for small saw logs. As my fuel is to supply a cook stove and a heater, and such wood sold here last winter at $4 per cord for sixteen-inch wood, it is evident that this land has not been unprofitable since the cattle have been getting some feed from it all the time.

I might have reserved a large number or straight thrifty soft maples of from six to ten inches diameter which in a few years would make superb flooring or fine lumber for any inside work.

I have several hundred hard maple trees, that were from one to four inches in diameter when we bought the property. Now for nearly three years—during the high prices for sugar they have supplied us with syrup fit for the most fastidious epicure.

One thing more, the third decade of timber growth should be greater than the first two and if the trees, that to be left are cut out for fuel the reserved ones left are spaced at eight to ten feet apart, they will grow still faster.—H. M. Beeles, Great Valley, New York.



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The following table of contents will give a suggestion as to what it contains. Every chapter is important and presents the subject clearly and forcibly.

Introductory Chapter 1. The Public Interest in the Price of Milk.
Part 1. The Price to the Producer. Chapter 2. The Forces That Fix the Price of Milk. 3. Manufactured Milk Products and the Price of Milk. 4. [illegible] Primary and International Markets. 5. [illegible] Shall Dairymen Organize for Collective Bargaining? [illegible] Organizations in Relation to Price.
Part 2. The Cost of Milk Production. 8. The Cost of Milk Distribution. 9. Sanitary Requirements in Their Relation to Price. 10. How Should Milk be Distributed? 11. Can Milk Distribution Costs be Lowered? 12. The Public Interest in Milk Distribution.
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Markets

PHILADELPHIA PRODUCE

—November 1, 1920.

Supplies of potatoes are quite liberal, there being here this morning in the neighborhood of 135 to 140 cars, most of which are from various Penna. sections. The market rules steady. Lehigh County potatoes are selling at $1.50@1.75 cwt., while Chester County, Bucks Co., Macungies and other sections range from $1.75@2.25 cwt. N. J. potatoes selling from 60@85c ⅝-bskt. for primes with No. 2s at 25@50c bskt. There has been an advance in the market on sweet potatoes. Primes range from 80c@$1, and No. 2s at 25@50c. **There were two cars of Eastern** Shore sweet potatoes selling at $3@3.25 bbl.

Vegetables—As the season on almost all nearby green vegetables is drawing to a close, supplies are already beginning to make their appearance from more distant points. Beets are still ample at 2@4c bch., or 40@60c ⅝-bskt. N. J. carrots steady at 40@80c per ⅝ bskt. Cabbage is firmer, domestic selling at $9@14 ton and Danish at $14@20 ton, with the bulk coming from N. Y. state. Cauliflower firmer and a little higher. L. I. selling at $1.50@2.15 crate, from Buffalo, $1.25@1.50 per crate. N. Y. celery sells at 40@85c bch. **The nearby celery is selling** at 8@15c bch. There was no corn, the season being practically over. Eggplants selling at 60@85c per ⅝ bskt. This morning N. Y. lettuce sold at 75c@$1.75 box, N. J., 75@$3 box. Lima beans from Maryland are selling at $3.75@4.25 hmpr. Onions are plentiful, best selling $1.50@1.75 per 100-lb. sack with fair to good at $1.25@1.40. Parsnips 40@80c per ⅝-bskt. Parsley, 1@2c bch. **Peppers are selling** at 10@40c ⅝-bskt. **Pumpkins are steady** at $1@1.50 bbl. Radishes 1½@2c bch. Nearby tomatoes are also almost a thing of the past and range from 50c@$2.50 ⅝-bskt. White turnips at 35@60c ⅝-bskt., with yellow, 65c@$1 ⅝-bskt. Spinach is quite active and is selling at 40@50c ⅝-bskt. A little watercress is showing at 2@2½c bch.

Fresh Fruits—Apples are in demand, especially high colored red apples and prices are higher, but common apples remain dull at former values, the prices on various varieties being as follows: Baldwins, $3.50@4; Ben Davis, $2.25@3.50; Gano, $3.50@4.50; York Imperials, $2.50@4.50; Kings, $1@5.50; Spys, $3@4.50; Greenings, $3.50@5; Wagners, $3.50@4; Twenty Ounce, $4@4.50; Rome Beauty, $4@5.50; Blush, $4.50@5.25; Stayman Winesaps, $2.50@5.50; Grimes Golden, $3@6.50; Jonathans, $5@6; Delicious, $5.50@8; Smokehouse, $3@4.50; Smith Cider, $3.50@4.50; Starks, $4@4.50; Hubs, $3.50@4.50; One car of New York peaches here out of storage sold at $2.25 bu. **Pears are steady** with Bartletts bu., $1.25@3; Seckels, $1.50@3 bu., keg, $3.25@3.75; Sheldons, $2.50@3 bu.; Anjous, $2@2.50 bu., and $6@7.50 bbl.; Louise Bonne, $1.50@2.25 bu.; Duchess, $1.50 bu.; Flemish Beauty, $1.50 bu. Quinces are light at $5@10 bbl. **Chestnuts** are in season and selling from 10@30c lb. There were 125 cars of N. Y. state grapes here this morning, the table grapes selling at 30@32c 2-qt. bskt. and wine grapes at $1.35@1.45 12-qt. bskt.

Live Poultry—Very low prices are prevailing in the poultry market which seems to effect shipments as this week there is a scarcity of all kinds of live poultry and prices are still advancing. Fancy heavy fowls are selling **at 26@40c per lb.**, with medium at 30@36c, and leghorns at 34@26c per lb. Ducks **are firm at 30@34c** per lb. Turkeys are selling around 42@45c per lb. Geese at 27@30c lb.

Eggs—Eggs continue to advance and the market went up 2c per doz. on all grades this morning, **and prices are** as follows: Nearby current receipts, 70c; firsts, 72@73c; fancy selected and candled, 82@83c per doz. Western eggs **also** shared in the advance and are selling at 66@69c on firsts with extra firsts at 71@73c per doz.

LANCASTER PRODUCE

—October 30, 1920

Despite a **general** decline in the price of eggs in **local stores**, the farmers attending local market this morning asked 85 and 90 cents a dozen for eggs and attempted to justify the **increase over last week**'s prices by referring to the increased cost of chicken feed. It was intimated that the price per dozen would reach $1 very shortly. Chickens sold at the top-notch price of the month despite a big decline on the Philadelphia markets. Very little corn appeared on the stands and that showing sold from 35 to 50 cents per doz. ears. The market was well attended. The quotations:

Butter and Eggs—Fresh eggs, 85@90c per doz.; country butter, 70@75c per lb.; creamery butter, 80c per lb.; duck eggs, 70@80c per doz.; goose eggs, 7@8 each.

Poultry—Dressed fowls, $2@2.50 each; broilers, $1@2 each; squabs, 50c@$1 ea.

Vegetables—Parsnips, box, 10c; spinach, 15@20c ½-pk.; turnips, 30c ½-pk.; peppers, 2@3 ea.; cucumbers, 5 each; potatoes, 20c ½-pk., $1.25 bu.; sweet potatoes, 30@40c ½-pk.; cabbage, 5@10c; cauliflower, 15@25c head; lima beans, 25@35c qt.; onions, 10c box; red beets, 5c bch.; beans, 10@10c ½-pk.; rhubarb, 5@6c bch.; tomatoes, 10@15c box.

Fruits—10@15c qt. box; apples, 15@20c ½-pk.; cantaloupes, 5@10c each; pears, 25@30c ½-pk.

YORK PRODUCE

—October 30, 1920.

The buying in the city markets this week will be the low ebb for the fall season. The cooler weather with its attendant frost will clean up much of the late produce and then prices will soon stabilize for the winter run. The apple market is at its lowest, stock of all grades and especially low graded, is coming in and the price is according.

Eggs, 75@90c dozen.

Butter—Country, 65@70c lb.; **separator**, 75c lb.; **milk**, 14c qt.

Poultry—Hens, 26@30c lb.; springers, 35c lb.; dressed, $1@2.25 each.

Vegetables—Potatoes, 10@25c ½-pk.; $1@1.25 bu.; **slow sale; lettuce**, 5@10c hd.; cabbage, 5@8c hd.; radishes 5c bch.; beets, 5c box; onion, 5c bch.; 10@20c ½ pk.; corn, 15@35c doz.; plenty; peppers, 15@20c doz.; lima beans, 40c qt.; soup beans, 25c qt., eggplants, 4@10c each; squash 3@5c ea.; hams, sliced 45@80c lb.; whole, 40@45c; lard, 25@28c lb.

Fruit—Apples, 10@40c ½-pk.; 50c@$1.50 bu.; pears, 15@25c ½-pk.; tomatoes, 10@20c ¼-pk.

Retail Grain Market—Wheat, $2.25; corn, $1.75; oats, $1; rye, $1.50; bran, $3 cwt.; middlings, $3.75 cwt.

Wholesale Grain Market—Wheat, $1.90; corn, $1; oats, 55c; rye, $1; bran, $45 per ton; middlings, $56 per ton.

NEW YORK PRODUCE

—October 30, 1920.

Butter—Receipts 1094 tubs. Trade wss slow, as usual, on the last day of the week, but offerings were light and values were well sustained at the late advance. Fresh solid-packed creamery, high-scoring goods, 64@66c, the latter for jobbing sales, extra, 63c; extra firsts, 58@60c; firsts, 46@52c; seconds, 41@44c; sweet creamery, choice to fancy, 65@67c; fair to good, 54@64c; ladle packed, as to quality, 35@37c; parking stock, 29@32c; fancy brands of nearby prints were jobbing at 71@74c; good to choice, 63@70c; fair to good, 60@62c.

Eggs—Receipts, 1358 cases. Strictly fine fresh eggs were scarce and firm, with demand readily absorbing all offerings. Unattractive stock, however, was quiet at the inside range of quotations. We quote the following: Nearby firsts, 69@71c doz.; nearby current receipts, 68c per doz.; nearby ordinary to fair, 60@64c; western, extra firsts, 69@71c; firsts, 61@67c; seconds, 52@57c; inferior lots lower; jobbing sales of fancy candled fresh eggs, 80@81c; fair to choice, 72@79c.

Cheese was quiet, but steady. New York whole milk, current make, fancy flats, 26c; common to fair, 22@25c; Longhorns, 26c; single Daisies, 26c; jobbing sales of fancy goods, 28@29c.

Vegetables—Potatoes, L. I., bbl. $4@4.50; Jersey, round, 150-lb. $2.75@3.25; Jersey, long, 165-lb. $3@3.25; 150-lb. $2.75@2.90; No. 2, $1@2; Southern, bbl. $2.50@3.50; sweets, Jersey 1s, bskt. $1.50@1.75; Jy. 2s, bskt., 75c@$1; beans, bskt., 50c@$3; beets, nearby, bbl. $2@3; carrots, nearby, 100, $1.50@3; celery, state, bch. 15@65c; Jersey, bch. 15@65c; cucumbers, hothouse, doz. $2.25@3; cabbages, L. I., bbl. 50c@$1; Jersey, bbl. 50c@$1.25; Dem. ton, $10@13; red bbl. $1@2; cauliflowers, nearby, crate, $1@2.50; eggplants, Jersey, bskt. $1@2; lima beans, Jersey, bskt., $3@4.50; L. I., bskt. $3@4.50; lettuce, Va., bskt. 50c@$1.50; hothouse, Boston, 3 doz., 50c@$1.25; onions, state and Wisconsin, yel. bag, $1@1.50; white, bag, $1@1.75; Spanish, case, $2@3; peppers, green, bbl., bell nose, $1.25@2.25; pumpkins, cheese, $1@1.50; Yankee, 50c@$1; spinach, nearby, bskt. $1@1.50; squash, Hubbard, bbl., $1.50@2; Marrow, bbl., $1.25@1.75; turnips, white, 100 bchs. $2@3.50; Rutabaga, bbl., $1@1.75; tomatoes, nearby, bush box or bskt., $1@3.50.

Fruits—Apples, bskts., fancy, $1.25@1.50; average, 65c@$1; bbls., York Imp. $3@4.75; Baldwin, $2.50@4.50; N. Spy, $3@4.50; Alexander, $2.50@4; 20 Ounce, $2.50@5; Wolf River, $3@6; Wealthy, $3.50@6.50; Greening, $1.50@4.50; Snow, $6@7.50; McIntosh, $4.50@9; King, $3@5.50; peaches, state, Elberta, best, $2@2.25; grapes, state, cond. bskt. $1.60@1.65.

PITTSBURGH PRODUCE

—October 30, 1920.

Butter and Cheese—Prints, 67@67½c; tubs, 66½@67c; cooking, 53@54c; Ohio, 62½@63½c; cheese, Wis. swiss, 49@50c; do 7-lb. brick, 31@32c; Swiss, 5-lb. block, 33@34c; Phila. cream, doz., $1; Longhorns, 31@32c; Limburger, 1-lb., 33c; do 2-lb., 32c.

Eggs—Fresh select, 70@77c; current receipts, 63@64c; candled storage, 50@57c; do at mark, 50@61c.

Produce—Potatoes, Mich. sack, $3.50; do bulk, 100 lbs. $1.75@2; sweet potatoes, E. Shore, bbl. $3.75@4; beans, wax and green, h. g. bu. $1.50@3.50; do Florida hamper, $3.25@3.50; do lima hamper, $4.50@4.75; onions, Spanish, crate, $1.75@2, do h. g. 100-lb. sack, $1.50@2; cabbage, h. g. bu., 75@85c; do bbl. $1.50@2; cauliflower L. I. crate, $2.25@2.50; do N. Y. crate, $1@1.50; Lettuce home grown, bskt., 30@40c; do head box $2@3; turnips, bu. $1.50@2; garlic, lb. 25@30c; parsley, doz. 35@40c; radishes, doz., 25@50c; tomatoes, Ashtabula h. h. basket, $1.50@2; do h. g. bskt. 50@75c; egg-plant, Fla. hamper, $3@4; cucumbers, home grown, bu. $3.50@4; mushrooms, bskt., $1.50@2; carrots, bu. $1.25@1.50; cellery, bch. 25@50c; peppers, hamper, $1.25@1.50; parsnips, bu. $1.25@1.50.

LIVESTOCK MARKETS

PITTSBURGH

Cattle—Receipts, 1500; higher; steers, $14.50@15; heifers, $9.50@11.50; cows, $8@9.50.

Hogs—Receipts, 6000; higher; heavies and heavy yorkers, $14.15@14.50; light yorkers and pigs, $14@14.25.

Sheep and Lambs—Receipts 3000; higher; top sheep, $8; top lambs, $11.50. Calves, 400, higher; top, $18.

LANCASTER

Cattle—Receipts, 2705 head; market active; prices 25c higher on all grades; good to choice steers, $13.50@14.75; fair to good, $12.75@13.50; medium, $10.75@12.25; common, $8.25@10.75; fair to good bulls, $8.75@10.75; fair to good bulls, $8.75@10.75; medium, $7.75@8.75; common, $6.25@7.75; choice to prime heifers, $11.50@12.25; good to choice, $10.25@11.50; medium, $9@10.25; common, $7.75@9; good to choice cows, $8.25@9.75; medium, $6.75@8.25; common, $5.75@6.75; canners and cutters, $3.75@5.75; good to choice feeder steers, $10.50@11.50; medium, $9@10.50; common, $7@9; good to choice stocker steers, $9@10.50; fair to good, $7.50@9.50; common, $5.50@7.50; good to prime stock bulls, $8@9.50; fair to good, $7@8; common, $5@7; good to choice stock heifers, $8.50@9.50; fair to good, $6.50@8.50; common, $5@6.50. Calves, receipts, 41 head; best grade, $16@17; medium, $12@16; common, $5@12.

Hogs—Receipts, 429 head; market brisk; prices steady, best grade, $15@15.50; light weights, $13.50@14.50; roughs, $10@13.

EAST BUFFALO, N. Y.

Cattle, receipts, 4100; good heavy steers, 25@50c higher; shipping steers, $13.50@15.50; heifers, $6@11; cows, $2.50@9; bulls, $5@9.50; stockers and feeders, $5.50@9; fresh cows and springers, $60@120. Calves—Receipts 2000; 50c higher, $6@18.

Hogs—Receipts, 12,000; 15@25c higher; heavy mixed yorkers, light yorkers and pigs, $14.25; few, $14.35; roughs, $12@12.50; stags, $8@10.

Sheep and Lambs—Receipts, 12,000; lambs, 50c lower; lambs, $8@14.50; yearlings, $7@10; wethers, $7@7.50; ewes, $3@6.50; mixed sheep, $6.50@7.

NEW YORK

Cattle—Receipts, 4140; irregular; steers, $9.25@16; no real prime steers; bulls, $5.50@9; cows, $2.50@10. Calves, receipts, 2340; higher; veals, $13@19; culls, $10@12, fed calves, $9.50@12.50; grassers, $7@9; yearlings, $5@6; western calves, $8@12.50.

Sheep and Lambs—Receipts, 8920; irregular; sheep, ewes, $3.50@7.50; culls, $2.50@3; yearlings, $8@11; lambs, $10.50@15; culls, $7@9.

Hogs—Receipts, 6020; steady; medium weights, $14.50; heavy hogs, $14; pigs, $13.50@14; roughs, $12.

CHICAGO

Cattile—Receipts, 90,000; native and western steers, 25 to 50c higher; top natives, $18; bulk, $10@15.50; heavy canning grades [illegible], $13.75; butchers stock opened 25 to 50c higher, advance partly lost; canner and cutters strong, 25c; bulk, $4@5.25; calves steady to strong; best vealers, $13.50@14; stockers and feeders, 25c higher.

Hogs—Receipts, 17,000; active 25 to 40c higher than Saturday's average, closing strong; top, $13.60 out of line; practical top, $13.50; bulk of sales, $12.75@13.35; pigs mostly 25c higher; bulk desirable, $1 to $1.25 pound; pigs around $13.50.

Sheep receipts, 23,000; fat sheep and lambs fully 25c higher; top native and fed western lambs, $13.75; bulk natives, $12.75@14.50; **choice fed western yearlings**, $12; fed western wethers, $9; native ewes, $7.25; bulk native ewes, $6.50@7; **feeders strong**; top feeder lambs, $13.35.

PHILADELPHIA LIVESTOCK

—October 30, 1920.

Receipts for week ending October 30:

	Beef cattle.	Sheep & lambs.	hogs.	calves
Totals for week	2630	8365	10208	1880
Previous week	2630	8365	10208	1880

Beef Cattle—Cooler weather stimulated demand and market firm, with calves slightly higher. Quotations: Steers, good to choice, $13.50@15.50; **fair to good, $11.50@13.50**; common to fair, $10@11.50; cows, good to choice, 8½@9½c; do, fair to good, 7@8½c; bulls, 6@8½c; calves, extra to choice, $17@17.50; fair to good, $14@15; common, $11@13; Tennessee, $14@15; other southerns, $6@10.

Sheep and Lambs—Well cleaned up and firm, with lambs again higher. Quotations: Sheared sheep, wethers, extra, $7.50@8; do, good to choice, $6.50@7; medium, $5@6; do, common, $2@3; ewes, heavy, fat, $5.50@6; lambs, spring, choice, W. Va., $14.50@15; choice, Penna., $14@14.50; medium, $11.50@13; **common, $9@10**.

Hogs—In fair demand at revised figures. We quote: Best western, $16@16.50; nearby, $14@14.25.

City Dressed Stock in better request and firm, with supplies well under control. Prices of lambs slightly advanced. We quote: Steers, 20@26c; heifers, 16@20c; cows, 10@16c; calves, city dressed, choice, 26@28c; calves, country dressed, 25@27c; lambs, spring, choice, **28@30c; sheep, 10@18c; hogs, 23c.**

PHILADELPHIA HAY AND GRAIN

—October 30, 1920.

Baled Hay and Straw—Receipts, 156 tons of hay and 3 cars of straw; quiet and barely steady. Quotations: Timothy hay, No. 1, none here; No. 2, $30@31; No. 3, $27@28; sample, $22@24; no grade, $18@20; clover-mixed hay, light mixed, $29.50@30; No. 1 mixed, $27@28; straw, No. 1 straight rye, $21@21.50; No. 2 do, $19.50@20; No. 1 tangled rye, $17.50@18.50; No. 2 do, $17@17.50; No. 1 wheat straw, $17@17.50; No. 2 do, $16@16.50.

Bran quiet but steady. We quote carlots, including sacks. Soft winter bran western, in 100-lb. sacks, per ton, $42.50@43.50; spring bran, in 100-lb. sacks, per ton, $42@42.50.

Corn—No. 1 yellow, $1.10@1.12.

Wheat—New; No. 2, red winter, $2.30@2.35; No. 3 red winter garlicky, $2.13@2.18.

Oats—No. 2 white, 67@67½c; No. 3, white, 66@66½c.

NEW YORK HAY AND GRAIN

—October 30, 1920.

Feed.—The mill feed market continued dull and only about steady. Mill offers were not heavy but the demand was slow and the trade seemed to be quite well supplied. The colder weather was looked upon as a favorable feature, altho there was nothing to show that buyers intend to load up heavily.

Quotations: City feed bran, $40; middling, $41, in 100-lb. sacks; red dog, $76, nominal in 100-lb. sacks; **Western spring bran, $40; standard middling, $41; flour middling, $51; red dog, $65, all in 100-pound sacks, 30-day shipment. Oat feed, $22; rye middlings, $39; white hominy feed, $45; all in 100-pound sacks. Cottonseed oil meal, $51.50; linseed oil meal, $57; in 100-pound sacks.**

Hay and Straw—Only one car of hay was unloaded at 33d street shed this morning and market is firm and higher. In Brooklyn there is very little hay available and values are averaging $1 per ton above 33d st. New invoices are still very light, though showing a little increase as the permits recently issued by the New York Central are being utilized. Rye straw continues rather firm. Oat straw quiet and easy. Hay, large bales, Timothy, No. 1, $41@42; No. 2, $40; No. 3, $37@38; shipping, $35@36; no grade, $20@32; clover mixed, fancy, $40@41; No. 1, $38@39; No. 2, 34@35; No. 2, $38@39; No. 3, $35@36; shipping, $32@33; no grade, $20@29; clover mixed, fancy, $39; No. 1, $35@37; No. 2, $32@33; straw, large bales, No. 1 rye, $26; No. 1 oat, $16; No. 1 wheat, no price quoted.

Wheat—No. 2 red c. i. f., $2.34½; No. 2 hard winter, $2.34¼; No. 2 mixed durum, $2.32¼; corn, No. 2 yellow, $1.13¼; No. 2 mixed, $1.12¼; No. 2 white, $1.14¼; oats, No. 1 white, 68c; No. 2 white, 67½@68c. Rye, c. i. f., $1.92¼. Barley, feeding, $1.04@1.06.

PHILADELPHIA DAIRY MARKET

—October 30, 1920.

Butter—Receipts, 7413 tubs. Creamery, higher than extras, 62½@63c; extra (92 score), 61½@62c; first (88 to 91 score), 47@60c; packing stocks, current make, No. 1, 31@32c.

Eggs firmer, receipts, 13,165 cases. Fresh gathered, extra first, 70@72c; do, first 65@68c; state, Penna. and nearby western hennery white, first to extra, 82@96c; do, brown, extra, 78@85c; do, gathered, brown and mixed colors, first to extra, 66@74c.

Cheese irregular; receipts, 3347 boxes, state, whole-milk flats, held, specials, 26@26½c; do average run, 24@25c; state, whole-milk flats, current make, specials, 23@24c; do average run, 21½@22½c; state, whole-milk twins, held, specials, 26@27½c; do, average run, 24@25c.

Poultry, live and dressed, steady and unchanged.

NEW YORK MILK MARKET

—November 1, 1920.

Weather conditions were favorable the early part of the week and demand more active. Later business was quiet and surplus increasing. The rate for November will remain the same as in October, or $3.65 per 100 lbs. for 3 per cent milk in 200-mile zone; add 4c per 100 lbs. for each one-tenth of one per cent additional butterfat.

Receipts of milk and cream in 40-quart cans for the week ending October 30, 1920, were as follows:

Railroad	Milk.	Cream.
Erie	40,012	2,236
Susquehanna	13,085	125
West Shore	14,775	1,579
Lackawanna	58,721	2,416
New York Central (long haul)	187,762	3,190
Ontario	47,110	1,887
Lehigh Valley	52,083	267
New Haven	6,800	50
Pennsylvania	12,755	495
Other sources	6,000	250
Totals	439,103	13,465
Same week last week	382,920	14,419

TOBACCO MARKET

—November 1, 1920.

True to their usual policy buyers have been extremely reticent in their transactions but a percentage of the product has been bought in **various localities**. News of this kind travels and of course the growers were interested in prices more than sales. The highest sale reported was at $35 per cwt. then and several sales were at $35 and 10. Also several sales were made at $30 and crops for which only $20 was offered some weeks ago were sold at an advance of $10 per cwt. or $10. While these scattering transactions hardly amount to a market they were considered favorable indications for the future when the general selling season opens.

There are an unusual number of [illegible] in the field many of whom are new to the situation which of course is considered very encouraging. The prospect of [illegible] prices together with a crop of unusual [illegible] spells favorable for financial results. The season never was better and [illegible] stripping has [illegible]. The same [illegible] until after corn is gathered [illegible] fall duties attended. Should [illegible] continue as satisfactory it is possible the crop will be sold direct to [illegible] soon as possible provided a fair price be obtained to facilitate trade [illegible] growers and buyers.

INTERSTATE MILK PRICES

—October 30, 1920.

Prices for milk delivered to Philadelphia by the farmer in effect for October are as follows: Three per cent milk, $4.20 per [illegible] or basic quantity price per quart of [illegible] 3.5 per cent milk, $4.40 per cwt. or [illegible] quantity price 9.6c per quart; for four per cent milk, $4.60 per cwt., basic quantity price of 10c per qt. The price for [illegible] milk 3 per cent, $2.41 cwt.; 3.5 per cent, $2.61 cwt.; 4.0 per cent, $2.81 cwt. [illegible] receiving stations. When milk is [illegible] the price f. o. b. Philadelphia is [illegible] per quart.

Farm Products Prices and Prospects

OUR WEEKLY TRADE AND PRICE REVIEW

Conditions and Prospects in the Cattle Trade

Cattle markets have been rather uneven the past week with price changes on steers at various markets so irregular that trends are uncertain. A tendency toward a narrower spread was noticeable, prime steers declining slightly at Chicago and Kansas City while common light steers made a fractional advance. Good cows and heifers as well as cutters and canners advanced slightly, but bulls went the other way. Calves have recovered some of their recent losses, St. Louis advancing $2.50 and heavy grassy calves were less of a burden. Dressed beef prices advanced sharply and veal prices were slightly higher.

Red Clover Seed Advances

Red clover advanced the past week, altho alsike and timothy did not share in it. Reports from country points have been less favorable but there is no broad demand altho prices are only about 35 per cent of those reached last March.

Prices at the week's close were:

Chicago, per 100 lbs., clover, $12@20; timothy, $5@6.50.

Toledo, per bushel, 1919 prime red clover, $13.80; 1920 prime, $14.00.

Decline Continues in Hog Markets

After a momentary show of strength during the middle of the week hog markets resumed their downward course, the net loss for the period being about 35 to 50 cents at leading markets. The spread has narrowed decidedly, 60 to 75 cents covering the bulk at most points. Even pigs, usually abundant at this season, are selling only a small distance below the top. Scarcity and strong demand for stock pigs are responsible for the unusual condition. Receipts declined the past week but were larger than a year ago, a reversal of the comparison that has prevailed most of the time this year. Greater firmness was in evidence at the week's close and readjustment to the winter basis may be suspended for a short time, altho there is little doubt that still lower prices will be seen. Fresh pork, cured hog meats, and lard all declined, the break in hogs evidently leading the way this time as consumptive demand has been strong. Packer buyers urge as one reason for reducing the price of hogs that the ratio of corn and hog prices is too wide. If the have ever boosted hog prices because this price ratio was too narrow it has not appeared in the records, altho their opportunities to do so have been numerous.

Horse Markets Continue Dull

To the normal seasonal dullness in the horse trade has been added the effect of industrial depression, tight money and southern crop price reductions. The past week shows but little change, markets everywhere being quiet. Range horses predominate at western points except Chicago. Good big drafters and wagon horses for the cities and plain heavy horses for the logging camps are the only kinds for which even moderate demand exists. A year ago horses and mules were going into the south by the thousands, but this year none is wanted. The southern season normally is good from September to March. It may revive during the winter, but last year's boom in such stuff will not be repeated. There is no reason now to doubt that the usual spring advance in equine values will take place. There will be little doing election week, Chicago suspending auctions entirely.

Chicago—Good and choice drafters, $225@325; common and medium drafters, $175@225; expressers, $125@225; farm mares, $115@150.

St. Louis—Good drafters, $200@225; good eastern chunks, $115@135; choice southerns, $100@135; medium and good southerns, $50@80. Mules, quotations mostly nominal.

Buffalo—Good and choice drafters, $250@350.

Close Balance in Wheat Supply

The world's wheat supply shows considerably closer adjustment to probable world requirements than it did six weeks ago. The reduction in the United States spring wheat crop by 20,000,000 bushels, belief that the Canadian crop has been overestimated by as much as 50,000,000 bushels, the change in the India crop due to drouth and revisions of European estimates which increase their import requirements have been the changing factors. An example of the last sort was the reported sale the past week of 320,000 bushels of wheat and rye by New York exporters to Jugo-Slavonia, a country which a short time ago was said to have a large surplus of wheat for export. Cold weather and frost are reported in Argentine where the wheat crop is in the last six weeks of growth. The Bureau of Markets states, in a recent summary, that "An analysis of the world situation seems to indicate a supply of wheat and rye to meet the probable Europe demand unless the buying power of Central Europe becomes much stronger than is now indicated. Other cereals will meet European demands even on a prewar consumption basis."

The heavy wheat export movement from United States ports continues. The total during the last four months was about 145,000,000 bushels from a surplus variously estimated at 230,000,000 to 250,000,000 bushels. Of the balance probably 50,000,000 bushels has been sold ahead for export. What turn affairs will take when our theoretical surplus is sold out is a question. Will European buyers turn entirely to Canadian grain and then wait for the Southern hemisphere crops or will purchases in our markets continue?

Corn and Oats Advance

The statistical position of the coarse grains is weak, but receipts are small and prices have advanced, corn even showing greater strength than wheat at the week's close. However, the shadow of a prospective heavy movement will be over the market for a long time. At the lower price with a profitable feeding ratio it is expected that farm consumption will be very large even with a reduced live stock population. Manufacturing demand from starch and glucose industries is limited. Perhaps, as last year, the lowest prices on the corn crop will be made before the new crop commences to move. The same thing has frequently occurred in the past so that the recent low of near 79c on December corn may be the season's minimum.

1919 prime timothy, $3.25; 1920 prime, $3.40; 1919 prime alsike, $16.75; 1920 prime alsike, $17.50.

Feed Prices Weaken Again

Mill feed demand was not sufficient to maintain the recent advance, as offerings were liberal at the higher prices. Bran is relatively stronger than shorts. Linseed meal declined about $2 and the cottonseed meal market remains weak as the demand is very poor. Crushers are not active as they claim seed prices and meal prices are out of line. Tankage has sagged along with other protein feeds, altho the discount under former levels is not so great. There is no bullishness in the feed trade, but there is a feeling that the worst is over.

Latest prices per ton (100 lb. bags) are as follows:

Chicago — Bran, $33.50@34.25; standard middlings, $33.50; flour middlings, $42@47; cottonseed meal, 43 per cent, $49; cottonseed meal, 36 per cent, $42; rye feed, $33@33.50; hominy feed, $42; old process oil meal, $55; tankage, $85; red dog, $60; gluten feed, $45.

Hay Markets Remain Depressed

Only light receipts have prevented further declines in hay, as demand is very slow. The South is buying much less than usual. Prices show little change for the week except Cincinnati is lower. All the factors have been against the market, such as the open weather, a crop above the average, abundance of other feed everywhere, reduced livestock populations, distressing conditions among dairymen and cotton producers, and corn and oats priced on a per pound basis not far above hay.

Latest quotations per ton in carlots are as follows:

Buffalo—Timothy, No. 1, $32@33; No. 2, $30@31; No. 3, $26@28.

Pittsburgh—No. 1 timothy, $34@34.50; standard, $32@32.50; light mixed, $31@32; No. 2 timothy, $31@32; straw-rye, $18@18.50; oats, $19@19.50; wheat, $18.50@19.

Philadelphia—Timothy, No. 2, $31@31.50; No. 3, $28@29; sample, $23@25; no grade, $18@21; clover mixed hay light mixed, $30.50@31; No. 1 mixed, $28@29. Straw No. 1 straight rye, $20.50@21; No. 2 rye, $19@19.50; No. 1 tangled rye, $17@18; No. 2 tangled, $16.50@17; wheat straw, $16.50@17; No. 2 wheat straw, $16.

Cincinnati—Timothy, No. 1, $29@30.50; standard, $28@29; No. 2, $27@28; No. 3, $23@26; thre hed, $13@18; mixed, clover light, $27@28; No. 1 $25.50@26.50; No. 2, $20@24; clover, No. 1, $29@30; No. 2, $24@26; sample grassy, $17@22; alfalfa, No. 1, $30@31; standard $29@30; No. 2 [illegible], $25@27; straw, wheat, $12@12.50; rye, $14@15; oats, $12.50@13.25.

Baltimore—Timothy No. 1, nominal, $33.50@34; standard, $33@33.50; No. 2, $32.50@33; No. 3, $26@29; light clover mixed No. 1, $30@30.50; No. 2, $28@29; clover mixed No. 1, $29@29.50; No. 2, $27@27; sample hay, $20@25; straw, No. 1 tangled rye, $17; No. 1 wheat, $15@16; No. 1 oat nominal, $18@18.50.

Stormy Days don't worry the man who works in a Fish Brand Reflex Slicker
He has the best waterproof garment made
Look for the Reflex Edge
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ESTABLISHED 1836
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DEALERS EVERYWHERE

A SPECIAL
Factory Cut-Price
U. S. Officer's Shoes
Hand sewed, first grade factory, cut-down price. Direct to you at only $6.85 Made of the best Waterproof Mahogany calf leather. If these shoes are not just as we say, send them back. You do not lose a cent. Retail price of this shoe is $10.00. Built for work and dress at the same time. If you are sending money order or check do not include postage. Pay only for shoes. We pay postage.
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First grade factory, cut-down price. Direct to you at only $5.85. Retail price of these shoes is $8.00. Made of the best elkskin waterproof leather. Second grade, $5.15.
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Saws 1¢ to 4¢ a Cord
Does the Work of Ten Men.
This one-man cross-cut saw outfit, run by gasoline engine, cuts 15 to 40 cords of wood a day—fells trees—makes ties—runs machinery. One man or boy can handle it. Easy to operate, easy to move. Engine can be used for other work when not sawing for yourself or neighbors.
PHILLIPS ONE MAN DRAG SAW
Fast money-maker and big labor-saver. Work anywhere in any weather. 30-Day Trial. 10-year guarantee. Write for Free Book and Cash price or Easy Terms.
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Built of high grade standard units that have stood the test
Capacities 1 to 5 tons.
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THE COLEMAN LAMP COMPANY
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Public Sale
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White Hall Farm, Waynesboro, Pa.
2 Miles East
Tuesday, Nov. 23, 1920
30 HEAD OF
REGISTERED GUERNSEY HEIFERS

A very promising lot good individuals and well grown, ages are 6 months to 2 years. These heifers are grand-daughters of such sires as Bob Ritme, Glenwood's Mainstay 40th; Dimple Bloom and others of equal breeding. About half of these heifers are bred to a grandson of King of the May.

Registered Durocs—a few good boars of March farrow and some extra good fall pigs. Sept. farrow, both sexes. Orion and volunteer blood lines. Catalogues on request.

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Electric cars pass farm every hour. Stop No. 11.

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100 Reg. O. I. C.'s, of the big fancy type of the very best blood lines of the breed Very low priced and every one guaranteed to please.

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O.I.C. Swine We have some bargains at present in young pigs and service boars. Will close them out very cheaply before going into winter quarters.

ELM GROVE STOCK FARM, Cortland, N. Y.

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Over 100 pigs for sale of the best breeding money can buy. Sired by Golliaths Sequence 285329, a grandson of Epochal and out of large prolific granddaughters of Grand Leader 2nd. Nicely weaned 8 to 10 weeks old pigs. Boars $10. Sows $12. Registered and transferred. Also one tried service boar and 3 gilts 1 year old. This stock is sold to be as represented or money back.

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Thanksgiving Day, Thursday, Nov. 25, 1920. Donegal Herd Registered Durocs will sell 50 head consisting of tried sows, spring gilts and boars, fall pigs of good type and breeding. Get a catalog.

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REG. DUROCS Large size, heavy bone, best blood lines, prices reduced for fall. Satisfaction guaranteed.
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HEAD YOUR BERKSHIRE HERD with a son of Highwood Majestic 19th. Pigs from spring and fall farrow. Write for prices and pedigrees.
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HAMPSHIRE HOGS. Pigs, 8 weeks to 6 months old, bred gilts and sows. Registered free.
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Big Type Poland China. Sired by Chief Lad, a grandsire of Mountain Giant, the $5,000 hog. Papers fur. Satisfaction guaranteed. I. S. Funslan, Amberson, Pa.

REG. CHESTER WHITE PIGS.
either sex. August farrow. Ready to ship
A. F. REIMENSNYDER. MILTON, PA. R. 2.

REG. BIG TYPE POLAND CHINA pigs, $15.00 each, first of November delivery.
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REG. O. I. C. pigs all ages, selected stock, attractive prices.
GRUBAKER BROS., Star R., Cocolamus, Pa.

Reg. Duroc Boars Col. Crimson Wonder, of Orion breeding.
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REG. O. I. C'S, all ages. Open and bred gilts at prices to move them.
Black Diamond Minorca Farm, Mt. Bethel, Pa.

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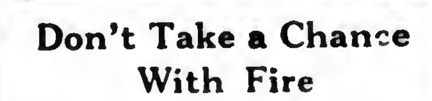

Don't Take a Chance With Fire

In many places a lantern or lamp is not convenient or safe, then you need a flashlight, absolutely safe—always ready—when going "down cellar" or "up garret" when hitching team in the dark—whenever you need instant portable light, indoors or out, you need the reliable Electric Flashlight.

This Franco Electric Flashlight is 7 in. long made of metal with Fibroid covering, simple, durable. Given as a reward for two new subscriptions at 75 cents each or with a single subscription and 75 cents additional.

Pennsylvania Farmer
261 S. Third St. Phila., Pa.

BREEDING BEEF CATTLE

Since you have asked for my experience in breeding Shorthorn cattle I will give you a brief acount of it.

The Pennsylvania State College issued a Bulletin entitled "Beef Production for Pennsylvania," of which I received a copy. After reading the bulletin I visited the College and with Prof. Severson, assistant to W. H. Tomhave, who has charge of the Department of Animal Husbandry, went over the work which they had done in their investigation to determine if the production of beef would not be more profitable than the raising of grain on the hills of Pennsylvania. After having gone over the summary of their investigation we then looked over the pasture and the cattle, which in itself was enough to convince any fair thinking person that it would be profitable as well as easy money. On this pasture we found two breeds of cattle, namely, Shorthorn and Aberdeen Angus. The next point of importance was to decide on which breed I wanted. Prof. Severson advised me that it was only a matter of choice with me. After having decided on the Shorthorn I began to look around for a bull calf. This took me the greater part of a year, as I seemed hard to please. I wrote to a great number of breeders and I thought they were trying to rob me when I would get their prices. They would range anywhere from $150 to $300 for a calf six months to a year old. I decided then I would not buy a "pig in a poke." I visited a number of herds in Green and Washington Counties, Pa. Finally, I found a calf two months old. After looking him over I thought he filled the bill. I did not ask the price, I just said I'll take him. They promised to keep him until he was four months old and leave him run with his dam, which they did. I received notice one day that they were going to ship him and to be on the look-out for him. He was three days on the way, which should have only taken one. When I got him he was so exhausted he could not make a noise of any kind. I got him home and left him nurse on a cow until he was six months old. He finally weened himself, as he began to look like a bull by that time. He cost me $151 at the station and I, at the time, thought it a pretty big price for a calf. If I was to buy him today he would cost me $300. We put this bull in service at the age of fifteen months. This summer we had eleven calves from his service and they have done so well that we are going farther.

In June I decided that the addition of a pure bred sire having been so encouraging, we would purchase pure bred females and raise purebreds instead of grades.

June 15th I attended a consignment sale of purebred Shorthorns and purachased two females, one a two-year-old and the other a yearling. I think, if the second addition to the herd is as profitable as the first, others will want to eliminate scrubs.

The total cost of our foundation stock is $500, which is very small, I think, considering that I purchased them on a high market. But high as it was, it has been a profit as well as a pleasure to grow better cattle.

Geo. Henderson, Huntingdon Co., Pa.

BUYING CATTLE FOR WINTER FATTENING

Naturally the best time to buy feeders on the open market is when there is a heavy run and a limited demand. Buy when there is little competition, especially competition between packers and feeders. Early fall buying, one year with another, is usually preferable; especially is this true in soft-corn years. Cattle should be purchased in time to consume the cornstalk fields and other coarse roughage, before severe winter sets in.

In determining what class of cattle to buy, such factors as age, quality, uniformity, and condition of feeders, length of feeding period, kinds and amount of feeds, and market conditions should be considered.

Older cattle make greater daily gains, fatten more quickly and utilize coarser and rougher feeds more advantageously. Young cattle, all feeds considered, make more economical gains, but require a longer feeding period. Older cattle usually show more uniformity.

As a usual thing, a good quality animal of any of the recognized beef breeds should be sought. Feeders showing dairy blood will not do as well as those of strictly beef blood, in putting on flesh in the region of the valuable cuts, and are always discriminated against in the market. However, certain conditions will warrant the feeding of common grades. A strong demand for good feeders and a sluggish market on common stuff might mean more profit in feeding the cheaper cattle.

Dehorned cattle feed out to better advantage, ship to better advantage, and market to better advantage. Get the quality and age to suit, and if you have to take horns in addition, dehorn when they go into the feed lot. The purchase should be uniform in size, color, and quality. As a usual thing, thin feeders are the best to buy. However, for a very short feed, cattle "warmed up" a little should be the better.

Market conditions for certain seasons of the year should help determine the kind of cattle to buy. A certain weight and quality of beef is in demand at certain times of the year. Be familiar with the general trend of the market according to seasons and feed the kind that will be in demand at the time you want to market.

KIND OF HORSES WANTED

The buyers are calling for horses standing at least 16 hands, with depth of chest equal to one-half their height, strong backed, powerfully coupled, deep ribbed and heavily muscled thruout, with properly set feet and legs, clean quality and sound. Such horses sell readily in any community at greater premium than any other kind of horses raised on farms. Competition from automotive power has knocked out the market for inefficient types, but good horses, to work either in the city or on farms, will pay good profits both to the man who raises this type of drafters and to the man who uses them.

It is the spirit of charity which makes a locality good to dwell in.

HOLSTEINS
The Pick of
EASTERN PENN.
to be Sold at Auction
Perkasie, Penna.
November 10th

.. sale of fresh cows and close springers selected by the management from the herds of

BRENTWOOD FARM, Abington, Pa.
STORM FARM, Perkasie, Pa.
WILSON M. JONES, Doylestown, Pa.
D. N. STERNER, Quakertown, Pa.
HOME FARM, Center Valley, Pa.
E. CLINTON FRETZ, Quakertown, Pa.
P. A. RICHTENWALNER, Emaus, Pa.
WILMER A. TWINING, Wycombe, Pa.
AND OTHERS.

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TRADE MARK REG. U.S. PAT. OFF.

Reduces Bursal Enlargements, Thickened, Swollen Tissues, Curbs, Filled Tendons, Soreness from Bruises or Strains; stops Spavin Lameness, allays pain. Does not blister, remove the hair or lay up the horse. $2.50 a bottle at druggists or delivered. Book 1 R free.

ABSORBINE, JR., for mankind—an antiseptic liniment for bruises, cuts, wounds, strains, painful, swollen veins or glands. It heals and soothes. $1.25 a bottle at druggists or postpaid. Will tell you more if you write. Made in the U. S. A. by
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Write for prices, feeding directions, etc.
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Lump Jaw Fleming's Actinoform, for 30 years the standard Lump Jaw remedy. $2.60 a bottle postpaid. Money back if it fails. Send for FREE Vest Pocket Veterinary Adviser. Describes Lump Jaw and 200 other Cattle and Horse diseases.
FLEMING BROTHERS, 263 Union Stock Yards, Chicago

25% Reduction on all Durocs

to close out quickly. No stock excepted. Excellent opportunity to improve your herd, at right prices. State wants quickly.
H. ED. BARCLAY, R. D. No. 4, Somerset, Pa.

REGISTERED O. I. C.'S
All ages. Bargains in bred gilts and boars of all ages. We are overstocked and the price is right.
ELM GROVE STOCK FARM,
Cortland, N. Y.

REGISTERED DUROC-JERSEY PIGS
$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs.
C. W. Ellis, Jr., Maple Lawn Farm, Cortland, N. Y.

EDGEWOOD HAMPSHIRES
Everything sold. Booking orders for gilts bred for fall farrow, and pigs for Pig Club work only.
DEPEW HEAD, MARION, OHIO

CRYSTAL SPRING STOCK FARM, Seelyville, Pa. Offer 20 registered Berkshire gilts of April farrow weighing 195 to 200 pounds by Symboleer's Masterpiece, the wonder boar and son of our American Champion, Symboleer's Junior. 2 boars suitable to head the best herds anywhere.

VIEWMONT FARM, Mainville, Pa., offers choice O. I. C. 150 to 175 lb. April and May pigs, from sires and dams out of National Grand Champion boars.
Reg. free. Shipped C. O. D.

FOWLER'S PURE BRED HAMPSHIRES
Will please you.
Best and largest herd in East.
THE FOWLER FARMS. MACUNGIE, PA.

REGISTERED DUROCS—Fall pigs both sexes for sale. Also a few mature animals including a good boar. Good breeding. Right type.
Northumberland Co. Duroc-Jersey Breeders' Assn., J. M. Fry, Corresponding Sec'y, Sunbury, Pa.

Big Type Poland Chinas All ages. Write your wants.
KEYSOR & CLELAND, GREENWICH, OHIO

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, Center Valley, Pa.

ROSECOYD FARM'S Durocs of Quality. Well bred, well fed.
D. M. STOUDT. Hershey, Pa.

FOR SALE—Reg. Big Type Poland China Spring boars and Gilts, one herd boar, 2 years old, choice fall pigs. R. H. LYLE, Cadiz, Ohio.

REG. O. I. C. PIGS. Aug. 1st farrow. Quality guaranteed. Two gilts, 7 months old.
L. D. LAUSHEY, SMOKETOWN, PA.

HAMPSHIRE SWINE
LOCUST LAWN FARM, Bird-in-Hand, Box 2, Pa.

BERKSHIRES that make satisfied customers. The Barnes Purebred Stock Farm, Grove City, Pa.

CHESTER WHITE PIGS.—A fine lot now ready to ship, either single or in pairs.
R. L. MUNCE. Canonsburg, Pa.

Holsteins Blaze the Trail to Success and Profit

Read what a successful 60-year-old dairyman said: "I have made the greater part of my money since I was 45. Up to that time I was busy making mistakes about cows. The difficulty is that some dairymen neglect the 'Black-and-White' facts. Any farmer who will study the supremacy of Holstein-Fresian cattle as profitable milk producers, and as dual purpose cattle, will soon steer his course by the star that leads to profitable dairy operations."

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THE HOLSTEIN-FRIESIAN ASSOCIATION
218 Hudson Street
Brattleboro, Vermont

Bull Calves At Farmers' Prices

We offer farmers an exceptional opportunity to secure a "King of the May" "Golden Secret" Bull calf at farmers' prices. This calf is from a clean, healthy, tuberculin-tested herd and is sired by Brookmeads Royal Master of Riverview No. 50362, who is a brother to Langwater Steadfast No. 31672, the bull that sold for $25,000 at the Langwater Sale, Sept. 21, 1920, the record price for the breed; is also brother to Langwater Stars and Stripes 2nd, who is Brookmead Farms' great herd sire; and grandson of Imp King of the May, who now has 30 A. R. daughters who exceed 822 lbs. butterfat; and is also sire of the famous cow Dolly Dimples May King of Langwater. Calf beautifully marked, real fawn and white. If you want a sire you'll be proud of, at a reasonable price, here's your chance.
RIVERVIEW FARMS, SWARTHMORE, PA.

BULL CALVES at BARGAIN PRICES

We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred, healthy bulls, from a clean, Tuberculin Tested Herd at reasonable prices. King of the May—Dolly Dimple—Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees.
WAWA DAIRY FARMS, 22 S. 32nd St., Phila., Pa.

SMITHSON HERD, REGISTERED HOLSTEINS

Two excellent young bulls by 32-lb. sires. Twenty Females, calves, heifers and bred cows. Must be sold before winter.
G. SMITH & SONS, Honesdale, Pa.

STEVENS HOLSTEIN FARM

of Cortland, N. Y., offers pure bred cows and calves, all ages; also extra high grade Holstein heifer calves $20 each, express paid in lots of 5; 2 heifer calves with purebred bull calf $75. Grade Holstein cows in carload lots. Wire me to meet you.
PAUL H. STEVENS, Prop.

WANTED A HOME

for choice registered and high grade Holstein-Friesian heifer and bull calves. $25 and up. Write us your wants. Bromecroft Farms, Cortland Co. McGraw, N.Y.

ORIGIN FARM

Hornless Holsteins, Registered and A. R. O. animals all ages, for sale. Federally tested.
GEO. E. STEVENSON, SCRANTON, PA.

GUERNSEY BULL CALF for sale, born June 20th; Dam Imp Easter Daisy 12583, daughter of Governor of the Chene; Sire Brookmeads Bonny Lad 38208, Langwater stock. George K. Bobb, Lansdale, Pa. R. 2.

TWO GRADE HOLSTEIN HEIFERS, 11 months old, well grown, from cows that give 10,000 lbs. milk each in one year. Bargain at $50 each.
OAKS DAIRY FARM, WYALUSING, PA.

GUERNSEYS FOR SALE 1 cow, two bred heifers, one bull calf. Highland View Farm, Cochranville, Pa.

MILKING SHORTHORNS—Young bulls, a few cows, and young heifers of the best breeding.
C. M. KENNEDY & SONS. ULSTER, PA.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale.
MILLARD E. BASEHOAR, Littlestown, Pa.

Ayrshire Bull Calves From high record A. R. Dams.
ROBERT TEMPLETON & SON. ULSTER, PA.

Reg. Holstein Bull Calves, from officially tested dams and a 30-lb. sire. Write for prices, pictures and pedigrees. Walter M. CRUTTENDEN, Forty Fort, Pa.

Miscellaneous

HOUNDS

For Coon, Skunk, and Rabbit Hounds; also puppies and started dogs. Buy now and know your dog when the season opens. Stamp for reply.
H. C. LYTLE, Fredericksburg, O.

Broken Hounds for Sale. Highly trained dogs of all kinds. Coon, Skunk, Rabbit, Airdales, Pointers and Setters. Also Puppies of all kinds.
GLEN ROCK KENNELS. GLEN ROCK, PA.

Chester Whites and HAMPSHIRE SHEEP. Write your wants. We can please you. TWIN BROOK FARM. Newville, Pa.

Ship Us cultivated and wild chestnuts, butternuts, black walnuts, fancy eggs, calves, poultry.
Wm. H. Cohen & Co., 232 Washington St., N. Y. C.

PURE BRED GEESE, Ducks, Turkeys, Chickens, Guineas, Dogs, Hares. Prices reasonable. Catalog free. H. H. FREED, Telford, Pa.

WANTED A thorobred St. Bernard or Newfound land puppy.
P. R. SHRIVER. Taneytown, Md.

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Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Eczema.—I bought a horse about 18 months ago. He was thin and in low condition. Now he is troubled with an itchy condition of the skin. He has rubbed out some of his mane and tail. D. H K., Jeannette, Pa. Give him 30 rains of potassium iodide in feed or in drinking water 2 or 3 times a day. Apply one part creolin and fifty parts water once or twice a day.

Indigestion.—Chorea. — Six-year-old horse has for some time lost flesh. During summer commenced to travel stiff, now is very stiff. H. S. B., Salem, Pa.—Change feed, give 30 drops fluid extract nux vomica and three drams Fowler's solution at dose in either feed or drinking water three times a day.

Pregnant Mare Comes in Heat.—Abortion.—Blind mare in foal comes in heat, but refuses to be served. She is in good condition. Lost her last colt five months after bred. How prevent aborting? J. J. J., Athens, Pa.—Give her good care, but no drugs. She may perhaps carry her colt full gestation period.

CATTLE.

Loss of Appetite. — Six-year-old cow has no appetite for grain, gives little milk and is unthrifty. G. O. C., Newton, N. J.—Mix equal parts ginger, gentian, fenugreek and salt together; give two tablespoons at dose in feed twice daily. Increase her grain ration.

Inflamed Teat.—Jersey cow has one swollen teat; have to draw milk with tube. J. W. O., Sharon, Pa.—Apply equal parts fluid extract of poke root and olive oil to teat twice a day. Give her ½ ounce fluid extract of poke in soft mash three times a day.

Sores on Teats and Udder.—Cow, first troubled with sores on teats, now has udder covered with sores. S. D. G., Watertown, N. Y.—Apply one part oxide of zinc and five parts vaseline to sores twice a day. Give her one ounce Glauber's salt in feed twice daily.

Abscess.—Small boil or abscess, opened, discharged some pus, but a bunch remains. H. H., Salem, N. J.—Paint bunch with iodin every day or two.

Bloody Milk.—Jersey cow, with first calf, gives bloody milk out of one teat. She is due to freshen again next April. R. G., Sugar Grove, Pa.—Her udder has been injured. Dissolve one ounce acetate of lead in one quart cold water and apply to bruised part three or four times a day.

SWINE

Sick Hogs.—Nearly half of my 33 hogs are sick; several have died. They refuse to eat, have high fever, nostrils full of mucus, breathe hard and quick. Some have fits and are sick only few hours. Bowels very costive. C. F., Frankford, Pa.—Call a competent veterinarian, as a diagnosis can not be made by mail.

Destroy and burn weed this fall and it won't get a chance to grow next spring.

Where there is education, there is no distinction.

Joy Time for the Cows!

THE cows surely like Union Grains—and that's Nature's way of showing that it's good for them. It contains just the right elements to make cows happy and healthy, with the big flow of milk that it is sure to bring.

Hundreds of the most successful dairymen who are feed experts themselves use Union Grains because in careful tests in which they weighed the milk and figured the cost of feed—Union Grains proved itself more economical.

It saves the time and trouble of mixing, too, and makes it possible to use that time to better advantage. Feed Union Grains and you know the feed is always right. Know where you make and where you lose money by keeping a Ubiko Cost Sheet. It will tell you which feeds and which cows pay best. Write for it. It's free.

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Almost 10,000 Guernsey cows have yearly records averaging 9000 lbs. milk and 450 lbs. fat. Guernseys make farming profitable. Send for our booklet, "Guernsey Cattle," just off the press.

The American Guernsey Cattle Club
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QUALITY ECONOMY QUANTITY

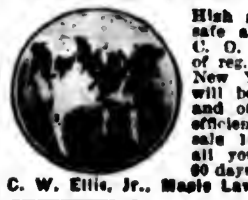
Two Splendid BULL CALVES

sired by my herd bull, Golden Rose's Successor (52866), a double grandson of Bedas May King and carrying 75 per cent of his blood. Bedas May King has 23 A. R. daughters with an average credit as mature cows of 616 pounds of butterfat. No. 1 Calf, born Sept. 12. Dam is Imp Uneeda Wideawake of Mara Alva. She produced 6470 pounds of milk and 294 pounds of butterfat with her first calf and 7133 pounds of milk and 326 pounds of fat with her second calf, in cow-testing association. No. 2 Calf, born September 21. Dam is Amity Betty. This is her first calf but a full sister in the herd produced 425 pounds of fat with her first calf.

Price of each bull $75 when nine weeks old, or less, if taken before.

Hugh Fergus, Slippery Rock, Pa.

MAPLE LAWN HOLSTEINS



High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.

C. W. Ellis, Jr., Maple Lawn Farms, Cortland, N. Y.

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Get busy you calf club promoters. I have 50 registered heifer calves, 3 to 10 months old, $100 each for the lot, choice $125.00. 200 registered and high grade cows, heifers and bulls. Car of any age that you want ⅞-Holstein heifer calves, $20 each Express paid in lots of 5.
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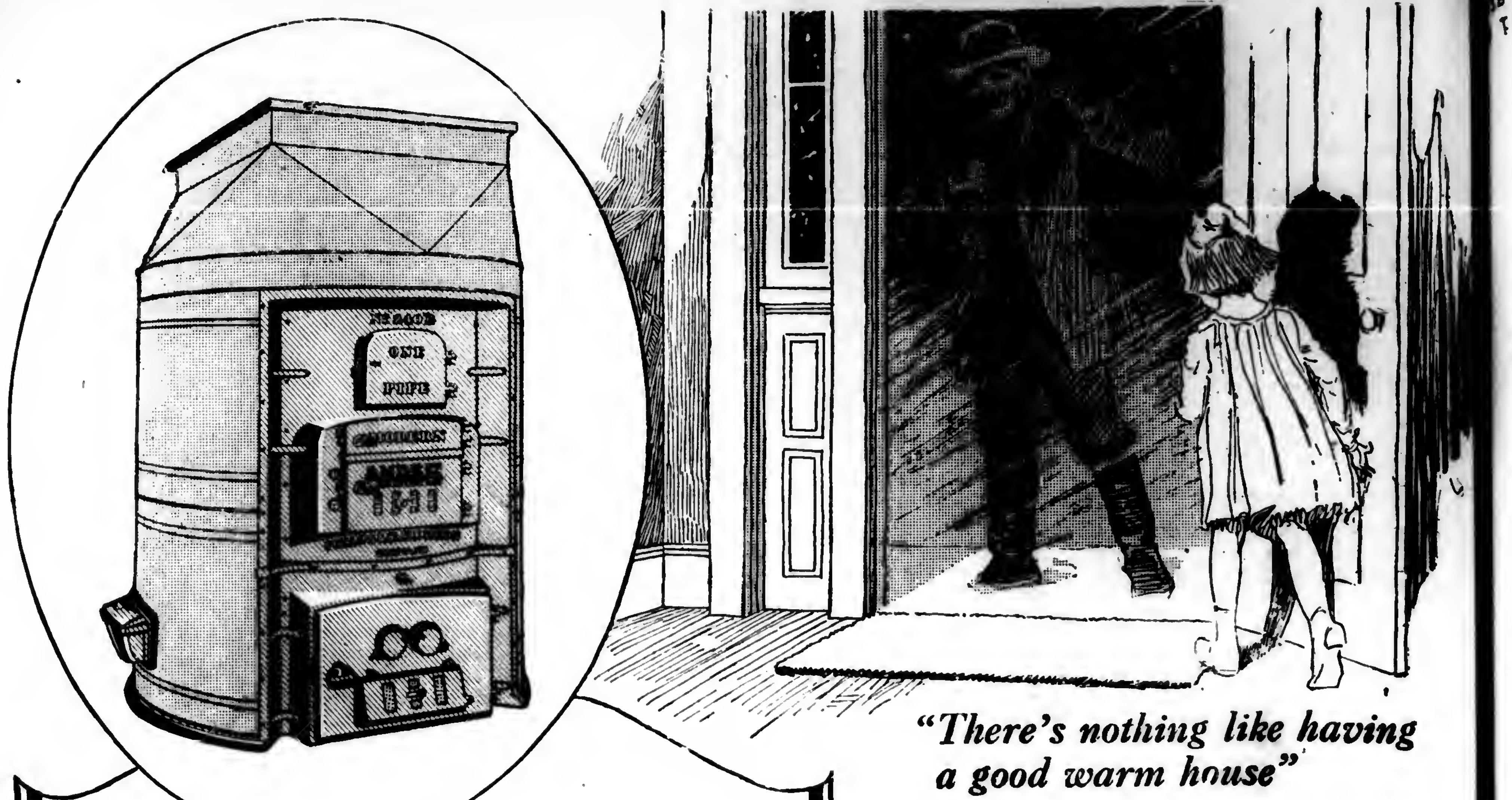
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ONE PIPE FURNACE
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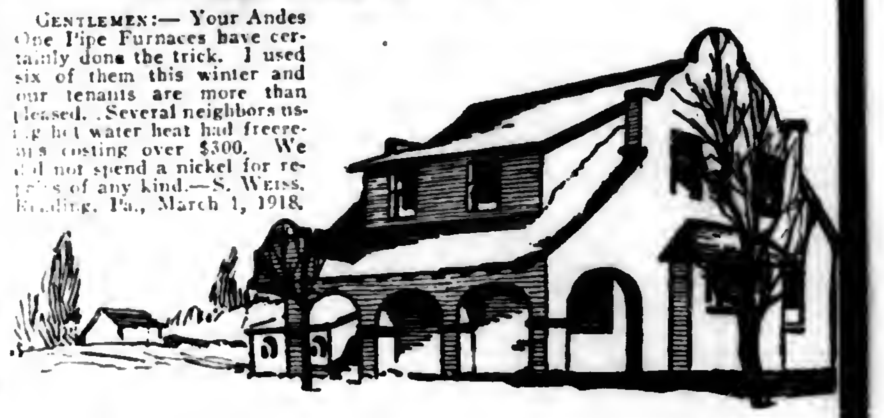

GENTLEMEN:— Your Andes One Pipe Furnaces have certainly done the trick. I used six of them this winter and our tenants are more than pleased. Several neighbors using hot water heat had freeze-ups costing over $300. We did not spend a nickel for repairs of any kind.—S. WEISS, Reading, Pa., March 1, 1918.

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ANDES

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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880
PUBLISHED WEEKLY

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A Meat Exporting Country

With One-Third of Her Cultivated Land in Alfalfa Argentine Exports are Large

Glenn B. Snapp

I have described to you a single estancia. Let us complete a short tour, visiting a French, two English and a Spanish Estancia, and an American hog ranch, which will give us a better general idea.

Between Buenos Aires and the Estancia San Juan are just 200 miles of camp, and our train does not cross a bridge worthy that name, nor rise over a single grade. Some places are low and undrained, as you will judge. The first 150 miles will not look good to us, for the wheat and linseed have been harvested and it is now grown to weeds, or it was unplanted. It has in fact been ruined temporarily by the "chacareros," or grain renter-farmers. They are usually Italian, hard working and well meaning but generally have a scant knowledge of agriculture, and always work under a miserably unjust system of rental, and at the mercy of the grain dealers, hog dealers and railroads alike, who have certainly not always failed to utilize their advantage. But they are gone now, most of them. Many of them went broke, and besides the "estancieros" or owners of the camp, will have no more of them. Cattle, besides being more profitable, are much easier and far less trouble for an absentee landlord.

The soil over this stretch of territory is very rich, being aluvial in origin, and rainfall varies from 35 inches near Buenos Aires to 27 or 28 inches as we go West, all coming during the growing season which is not seven or eight months, but ten and eleven, with cooler and more agreeable summers than those of Kansas or Missouri. What could not this country do, if subjected to our methods of land tenure and cultivation! It will come back to grain I think because much of it is underlaid with "toska," a soft mixture of rock and shale about one foot thick and two or three feet below the surface, which ruins it for alfalfa.

San Juan is at station General Pinto, the patriot, who once held title to all the land of the vicinity. South of it at Aranoza is the estancia "Mitikile" of M. Sere, a Frenchman, who a few years ago secured a corner on grain bags and amassed a great fortune. Then he bought a cattle estancia, as does every professional or business man of Argentina if he makes a success of his profession.

Mr. Simson, the English majordomo at Mitikile, is known as one of the best Shorthorn men in Argentina. He points out to us among his cows here a Butterfly cow, here an Avalanche, there a Broadhooks, there a Secret, and so forth thru the best families of the breed. Mitikile showed the reserve champion bull at Palermo last September, an honor which cannot be excelled in the Shorthorn world except by exhibiting the champion at Palermo.

Six and a half leagues of camp make Mitikile, or 40,000 acres. Perhaps a half of this is in alfalfa, and huge alfalfa stacks, not for winter feed but as insurance against a bad season, dot the prairies. Some of it has been standing for three years. Mitikile is carrying 18,000 cattle, reds and roans, and employes upwards of 50 men, for whom a beef must be killed each and every day.

"La Escondida" is one of the half-dozen pure-bred Angus estancias in Argentina. It consists of 5½ leagues, perhaps one league of which is low, waste land, and on the estancia is some tosca land. It has, however, 12,000 acres of alfalfa camp. The herd consists of 8000 Angus cattle, said to be the largest Angus herd in the world, and 2000 Shorthorn steers, recently purchased from less favored camps for fattening on alfalfa pasture. La Escondida is English-owned and English-managed, the majordomo, Mr. Freston, being a man who understands Angus cattle.

These three estancias are in the heart of the alfalfa district. If you will go west of them 70 miles to Buchardo, and from that point as a center draw a circle of about 300 miles diameter, you will not get out of the alfalfa district. The soil is aluvial but rather light. Sweet water lies from three to ten feet below the surface, with only fine sand between. The average rainfall does not exceed 27 or 28 inches, nor fall below 22 or 23 inches. You must believe me when I tell you, for I have seen them, that there are not a few establishments with 400 square miles devoted to alfalfa pasture, and areas of 100 to 150 square miles are common. Other grasses grow up in the alfalfa after a year or two, or are sometimes sown with it, improving it for pasture. The alfalfa remains on the soil for from ten years up to twenty years, the land requir-

(Continued on Page 4).

A Modern Stock Barn Equipped for Money-making.

Slaughtering Hogs for Home Use

Simple Directions Which Tend to Make the Work Easy and Successful

By Prof. W. H. Tomhave

Pennsylvania State College

With the approach of cold weather it will soon be time for slaughtering hogs on the farm. In many sections this practice has become a lost art and much of the pork that is used in the home is purchased on the market. Such practice is not economical and not conducive of providing a liberal supply for home use. In some cases the dressing of hogs for home use has been abandoned very largely because of poor results preparing pork for home use. It is not a difficult task to slaughter hogs on the farm and properly prepare the meat for curing if a few simple rules are followed.

Hogs that are to be slaughtered should be properly fattened in order to insure a good supply of meat. The weight of the hog is not such an important factor but hogs weighing between 200 and 300 pounds are the most desirable weights. Hogs intended for slaughter should be kept off feed for from 8 to 24 hours. They should be allowed all the water they will drink during this period. Withholding the feed in this manner eliminates the waste from the body and will clear the paunch and intestines of their contents. This not only makes it more convenient to remove the internal organs at the time of dressing the hogs but it also means a saving of a very considerable amount of feed.

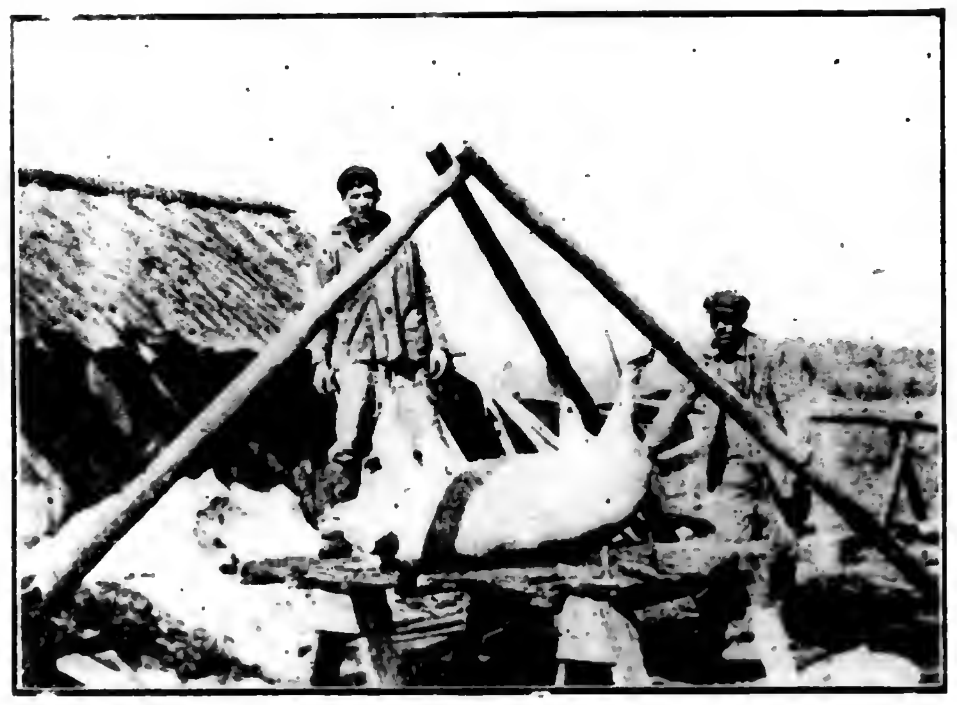
In addition to keeping the animals off feed for this length of time they should be carefully handled. Hogs should never be overheated or excited. Such practice will cause an abnormal condition of the body and meat is likely to spoil after it is put in the curing vessel. The condition of the animal should be as near normal as possible. Care should be taken that the animals are not bruised or whipped just before slaughtering as such practice will result in a badly bruised and spotted carcass.

It is not necessary to have an elaborate outfit of tools and equipment for this work. A few simple tools such as a good sticking knife, skinning knife, vessel for scalding, bell-shaped stick scraper, 12 or 14-inch steel, a hog hook gambrel and a meat saw will suffice.

In sticking the hog the knife should be inserted on the midline about 4 to 6 inches in front of the breast bone. The knife should be kept in the straight line so as not to stick in the shoulder and causing a bloody shoulder which means a waste in trimming the meat for the curing vessel. The knife should be pointed directly toward the root of the tail and inserted deep enough to cut the arteries at the point where they come from the chest cavity. Care should be exercised that the point of the knife does not enter the chest cavity so as to pierce the heart causing instant death and also filling the chest cavity with blood.

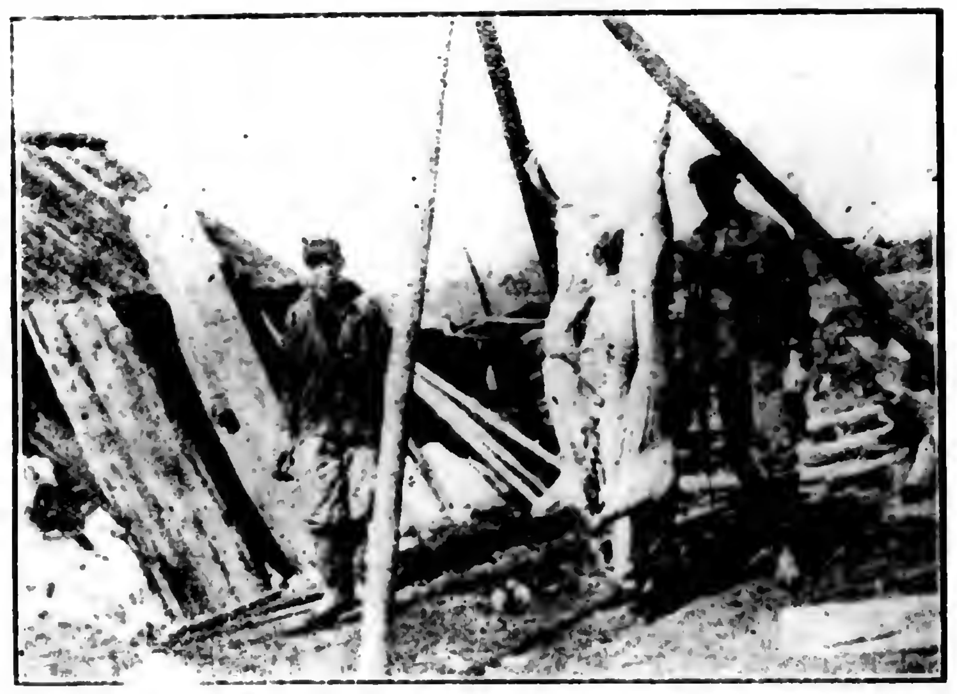
As soon as the hog has been well bled it is ready for the scalding vessel. A barrel or tank may be used for this purpose. The most desirable temperature of the water for scalding hogs is from 150 to 155 degrees Fahrenheit. It is difficult to keep water at this temperature unless there is some means of adding water at a higher temperature. If the work is done out doors, it is well to have the water boiling when put in the tank or barrel and sufficient cold water added to reduce it to the right temperature. If no thermometer is to be had a fairly reliable test is to insert the fingers in the water three times in rapid succession and if it burns severely the last time the water is about right. This test is only approximate, however, as some people can stand much hotter water than others. If the water is too hot there is danger of setting the hair, but if the hog is taken out for "trying" shortly after it is inserted in the water there is little danger of the hair "setting," making removal difficult.

It is well to use some ingredient in the water that will help remove the dirt and scurf. The best material for this purpose is a cupful of soft soap or washing soda, a teaspoon of lye or a small shovelful of hardwood ashes added to every 30 gallons of water. The water should be well stirred before the scalding is started.



Showing How a Derrick is Placed to Swing a Carcass

If a barrel is used for scalding, insert the hook in the lower jaw. Place the hog on the bench or table against which the barrel should be placed at an angle of about 45 degrees. Scald the hind end first so that if the water should be too hot and the hair set, the hair can be more easily shaved from the hind quarters than from the front of the carcass. The hog should be kept moving while in the water.



After the Derrick is Raised and the Platform Removed

After the hog has been in the water a short time it should be drawn out and the hair "tried." As soon as the hair and scurf come off easily pull the hog out on the bench or table and remove as much of the scurf and hair from the legs as possible. Also remove the bulk of the hair and scurf from the part that has been scalded by use of the hand scraper.

The next step is to scald the front of the carcass. Before inserting this part of the carcass in the water, loosen the tendons on the back of the hind leg. These are loosened by making a cut about 3 to 4 inches long just below the hocks. Lift out the tendons and insert the gambrel which can be used for handling the carcass while the front part is being scalded. As soon as the hair and scurf are loosened so that they will come off readily pull the hog out on the table and scrape the carcass. Remove as much of the hair and surf as possible with the scraper. Next, pour hot water over the carcass and shave off with a sharp knife any hair that was not removed during the first scraping. Loosen the tongue by cutting on both sides inside of the jaw bones It is much easier to remove the tongue before the carcass is suspended as it is difficult to get at, when the carcass is hung up. The gambrel is inserted in the openings made by loosening the tendons of the hind legs. The carcass is then hung up at a convenient height for removing the internal organs. A ladder set against a building, or a rack of some kind will hold the weight of the carcass.

After the carcass is hung up, pour hot water over it and shave off all the hair and dirt that were not removed at the previous shaving. Always start at the top so that the dirty water will not streak the carcass. Rinse the carcass with cold water and scrape it clean.

After cleaning the carcass the next step is to remove the internal organs. Make a long cut thru the midline, beginning at the top and cutting down to the head. Split the pelvic bones and cut around the rectum so that it can be drawn out. Open the abdominal cavity by placing the knife between the first and second fingers of the left hand, inserting the fingers into the cavity and with the right hand forcing the knife down to the breast bone. Care must be taken that the knife does not project between the two fingers, as there is danger of cutting the contents of the abdominal cavity. If the knife is held in this manner the fingers will serve as a guide and the intestines will not be cut. As soon as the opening has been made remove the fat that surrounds the stomach and pull out all the organs of the abdominal cavity. These consist of the intestines, stomach, spleen and liver. Next split the breast bone by cutting from the neck up. In young hogs this can be cut with a knife if the cut is made in the exact center. In old animals a saw or cleaver must be used. Remove the "pluck" by cutting the diaphram that separates the organs of the abdominal and chest cavity. Cut all the attachment along the back bone and the heart; lungs and gullet are easily removed. Wash out the inside of the carcass with cold water being careful not to splash the outside. Remove the kidney fat or leaf lard while the carcass is warm. Begin at the point near the ribs and pull up toward the ham and it is easily removed. Such practice will aid in cooling the carcass. During cold weather it is desirable to split the carcass while warm so that all the animal heat can be removed in the shortest possible time. If the carcass is not split while warm, spread the sides by holding them apart with a stick from 12 to 18 inches in length.

If the butchering is done at a time when the temperature is near freezing it will aid in cooling the carcass. It is desirable not to freeze the carcass. It should be allowed to hang until well cooled before it is cut for the pork barrel.

Soils and Fertilizers

Conducted by Dr. J. G. Lipman

Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

THE IMPROVEMENT AND MAINTENANCE OF PASTURE LAND IN ENGLAND

It is estimated by Sir Thomas Middleton that during the period 1909 to 1913, 100 acres of cultivated grassland in the United Kingdom supported rather less than 17 persons. Land under crops other than grasses and clovers supported in 1916 84 persons per 100 acres. He estimates, likewise, that in the period before the war the two important human foods, wheat and potatoes, were allotted three million acres whereas 36 million acres were used for the growing of crops used as food by cattle and sheep. Hence, under the conditions prevailing in the United Kingdom, the subject of pastures and their maintenance is one of utmost importance.

The best fattening pastures of England are found in the Market Harboro district of Leicestershire. The best field in that district will produce 180 to 200 pounds of meat per acre without the use of oil cake. Such land will, therefore, maintain one steer per acre in the early part of the growing season. It is questionable, however, whether there are as many as 500,000 acres of pasture in England that will support one steer per acre. It is well known that there are at least 15 million acres of hilly grassland that produce probably less than 5 pounds of lean meat per acre. There are very many thousands of acres of pasture that produce only 20 to 25 pounds of lean meat per acre. The most reliable estimates would indicate a production for the United Kingdom of 90 to 100 pounds of lean meat per acre. It is true at the same time that the best pastures produce three times as much meat per acre as the average pastures and ten to twelve times as much as the poor pastures.

In 1902 Sir Thomas Middleton laid out four-tenth acre fields of pastureland at Cockle Park in the County of Northumberland. When first laid out this pastureland produced about 20 pounds of meat per acre when used for cattle and sheep. His records show that during the eleven-year period, 1904-1914, the average production of meat per acre was 105 pounds. The results obtained are attributed by Middleton entirely to the use of basic slag. As stated by Middleton, "The results of many other experiments might be cited to prove that on thousands of acres of this country the yield might be equally increased by the proper use of basic slag. The effect of the application of basic slag to some types of pasture is so striking that the results have been described as magical; but there is no magic in the action of the manure. This depends on the habit and manner of growth of white clover on land that has been depleted of phosphates by corn growing, and has then been left to 'tumble down' to grass." It is further noted by Middleton that basic slag and white clover are a most potent means for improving the stock-carrying capacity of pasture land. Small wonder then that Middleton, and other leaders in British agriculture, lay so much stress on the importance of increasing the supply of basic slag for English agriculture.

Basic slag, as is well known, represents a by-product in the making of steel from ore which contains phosphorus. The phosphorus must be removed lest the quality of the steel is seriously injured. In the so-called basic process lime is mixed with the ore and made to combine with the phosphorus. Practically all of the lime and phosphorus are recovered in the slag, which, when cooled, is ground to a fine powder. Good grades of basic slag are supposed to contain 17 to 18 per cent of phosphoric acid. It is suggested by Middleton that greater consideration be given by the manufacturers of steel to the production of larger amounts of slag and the improvement of the quality of the slag. In basic slag Middleton sees a means for increasing effectively the carrying capacity of English pastureland in order that the acreage of grassland may be reduced and that an ample supply of basic slag, 4 million acres of pastureland should be released for the growing of tilled crops. This would permit the United Kingdam to reduce in a very material way the proportion of breadstuffs now imported from abroad. —J. G. Lipman.

CAUTIONS FARMERS ON POINTS TO WATCH IN MAKING LEASES

A clear and equitable lease contract is of prime importance to both tenant and landlord, yet because of the difficulties involved in drawing up such a contract to fit a given case, tenants and landlords alike often are content to use some easily available printed form, that may or may not be best suited to the conditions. In Farmer's Bulletin 1164, The Farm Lease Contract, the United States Department of Agriculture urges farmers to make sure that their leases say just what they were intended to mean.

Lease Should Fit Case

It is pointed out that custom often tends to perpetuate a long-established type of agreement, even tho conditions do not continue to justify the terms involved. For example, the stock-share lease, almost universally framed on the 50-50 basis, with the landlord furnishing the land and the tenant furnishing the labor, work stock, and equipment, is not necessarily equitable. Land and labor vary in relative value, and what might be an equitable ratio upon which to base division of returns in one case might be altogether unsatisfactory in another. It is urged that an adjustment should be made in each individual case, taking into account the relative value of the elements contributed by the contracting parties. The following-described method is suggested for making such an adjustment.

An Attractive Farm House in Central New Jersey

"First an estimate should be made of the fair value of the use of the land and of the value of ordinary farm labor, with additional estimates of the cost of horse labor and the annual cost of the use of equipment. The value of each of these items may be determined with a fair degree of accuracy in advance. The ratio of the two values should be determined, and all other expenses and receipts should be divded in the same proportion. Suppose, for instance, that the fair value of the use of the land for a year is found to be $500, while the fair value of the farm labor, horse labor, and use of equipment is $1,000. The ratio of these quantities is 1 to 2. The landlord should then pay one-third of all other expenses and the tenant two-thirds. After these other expenses have been deducted from the total receipts the landlord should receive one-third of the remainder, and the tenant two-thirds."

Thus the receipts will be divided in exact proportion to the value of the contribution of the parties in fulfilling the contract.

"Stop, Look and Listen"

In the following series of questions, designed to serve as a sort of "stop, look and listen" warning to farmers who have to do with lease contracts, the authors of the bulletin summarize the main points to be taken into account in drawing up a farm lease.

"Is it so written that its meaning will be clear at any later time?

"Is it fair to both parties?

"Does it give the tenant a reasonable opportunity to make a comfortable living and to get ahead?

"Does it require proper and conservative care of the premises leased?

"Are all desired reservations to the lease made?

"Are the things stated which each party is to do and to contribute?

"Does it make clear the rights and privileges of each party?

"Does it define the relationship between landlord and tenant and provide for the settlement of differences of opinion?

"Does it contain a statement of the procedure to be followed when the relationship of landlord and tenant is to be terminated?

"Does it contain the following essentials to a legally complete lease?

"1. The date it was made.

"2. The names and the final signatures of the contracting parties.

"3. The period for which the lease is to run.

"4. A description of the property leased.

"5. An agreement in respect to the amount of rent to be paid and the time when and the place where it is to be paid."

APPLYING LIMESTONE ON FALL PLOWING

Many farmers find it difficult to apply limestone in the early spring, on account of the unavoidable rush of spring work. Where land is fall plowed limestone can be applied more advantageously in the fall than in the spring. Limestone spread in the fall is more effective on the spring crops because it has more time to become active. The limestone may be lightly harrowed in after spreading on the plowed ground, or not, as desired.

R. C. Collison, of the Geneva Experimental Station says, "Our station has for the last eight or nine years advocated the application of ground limestone on fall plowing."

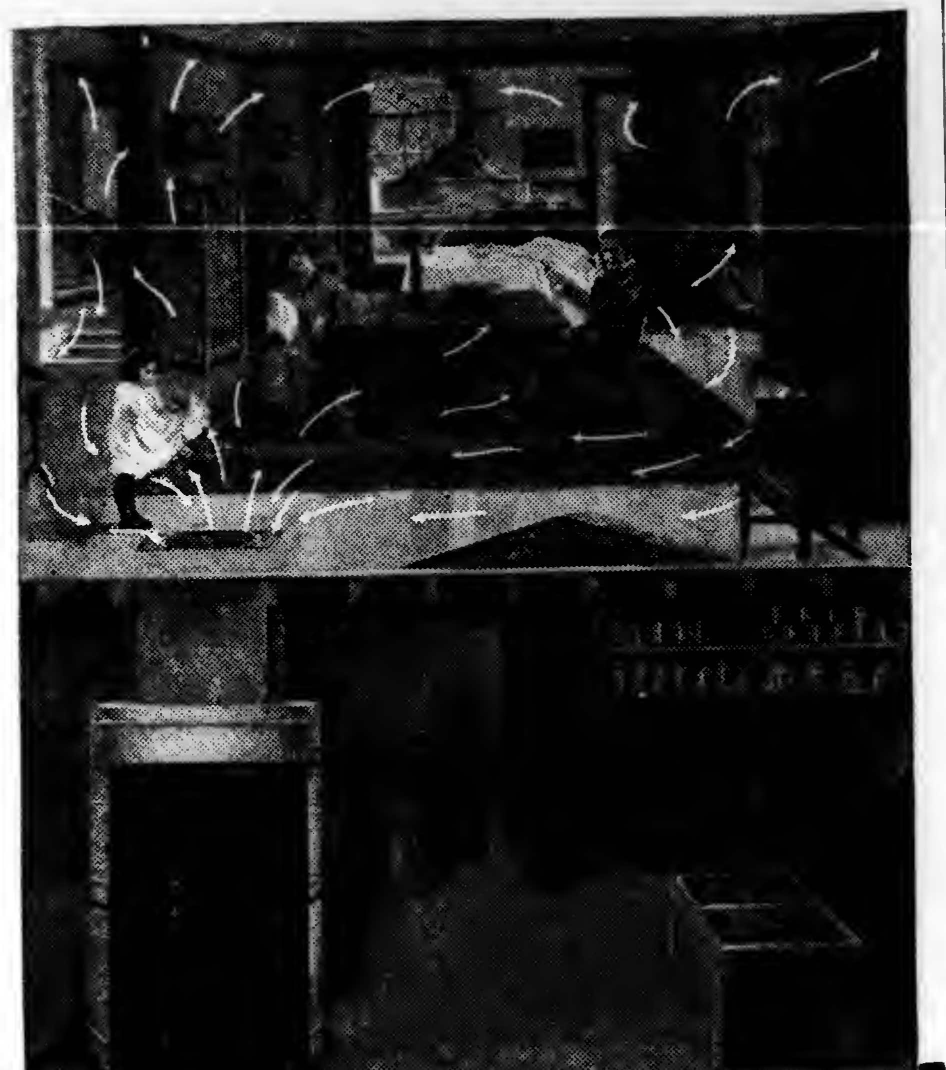
The permanent pastures of the eastern United States have for years been drained of their lime and phosphorus supplies. The point has now been reached when they must be fed if they are to produce desirable pasture. Where it is possible to do so these pastures should be plowed and, after applying lime and fertilizer, seeded down with a crop such as oats. However, much of our pasture land is too steep or stoney to plow. Where this is the case excellent results are obtained by top dressing with lime and acid phosphate or manure and seeding with the following grass mixture:

Alsike Clover	1 lb.
White clover	2 lbs.
Kentucky blue grass	2 lbs.
Orchard grass	2 lbs.
Red top	2 lbs.
Total	9 lbs.

A light seeding is usually sufficient. The lime and fertilizer can best be applied in the fall or early winter. Limestone should be applied at the rate of one ton and the acid phosphate at the rate of 200 lbs. per acre. Where it is possible it is best to go over the land with a harrow before sowing the grass seed as this helps work the lime and fertilizer into the soil and makes a better seed bed.

Top Dressing Meadows

It many times happens that it is impossible during the rush of planting to make the needed application of lime on the crop preceding clover. In such cases the clover crop can be insured by using limestone in the fall or early winter as a top dressing. This also applies to old meadows that are not producing well. In Orange County, N. Y., the Farm Bureau Manager reports eight cases where ground limestone was spread on old meadows. There was an average gain of 1268 lbs. of hay per acre from this application. The average application should be 1 ton per acre.



The Proper Kind of House Warming Can be Had by Installing a

Red Cross Empire

PIPELESS FURNACE

The scientific principals embodied in its design make it unusually economical and provides an even flow of warmth that assures comfort all through the house.

Cold days are drawing nigh, so now is the time to plan to make your home more cheerful and comfortable this winter by installing a

Red Cross Empire Pipeless Furnace

which is easily installed and operated, being well made of good material, for houses large and small. These furnaces have a reputation of over 50 years of stove and furnace making back of them.

Send us a floor plan and description of your house and we will advise kind and size furnace best suited for it.

Write for a copy of our new RED CROSS EMPIRE PIPELESS FURNACE Catalog and Name of Dealer Nearest You

Co-operative Foundry Company

Rochester, N. Y.

Manufacturers of the Celebrated line of
Red Cross Stoves and Ranges and Bermuda, Ajax, Empire and Empire Pipeless Furnaces

A MEAT EXPORTING COUNTRY

(Continued from Page One).

ing in that time neither sowing nor cultivation nor harvesting. Where it is harvested it produces five crops the year, for the growing season is ten months. As a matter of fact, the last crop is always left to stand, and under the protection of the mat which it makes, the young alfalfa continues to grow the winter thru, for frosts when they come, are light.

Let us drop south now 150 miles or so to the American hog estancia "La Nara," near Luro. This is still in the alfalfa district, of course, or it would not be growing hogs. Here from 9000 acres of camp, the Campion Bros. will market this year about 25,000 hogs weighing around 300 pounds each. One-third of the corn which they feed will raise on the estancia, and two-thirds they will buy. Just now it is costing them 50c a bushel, and just now hogs are selling in Buenos Aires at 12½ to 13 cents a pound. The staff of men required to raise this corn and these hogs will not exceed 100. There is not a dollar invested in sheds or barns, except four or five pieces of cheap shelter for those sows which are growing boars for the herd. Three thousand sows will farrow twice this year, out on alfalfa grass, in a nest of new straw. This is the "piggery." They will farrow an average of seven pigs each, and raise an average of 4½ pigs each, each time. There will be no difcufilty in getting them to breed twice during the year. There is a railway station within the bounds of the estancia. About one-half the estancia is in alfalfa, and the corn fields will not be husked, but will be hogged off. Mr. Campion says that he expects to have practically the entire area under alfalfa within a few years. Twenty months ago Mr. Campion bought 3000 acres of his estancia, paying about $40 an acre. Similar land is now selling in the community for $70 or higher.

Some ten miles from the Campion Bros. is "Dos Marias de Palacios," Argentine owned and Argentine managed. It contains but three leagues, and is therefore smaller than common, but the property includes an additional league some distance away, all in alfalfa, for fattening steers. A litle over 2000 acres of these 25,000 are in cereal crops, and some 5000 tons of hay was stocked this year. The remainder of the estancia is devoted to grazing. The estancia is carrying 15,000 cattle, 3500 of which are breeding cows, and 1200 more heifers coming into breeding this year. About 3000 or 4000 steers will be bought this year, for fattening on alfalfa. About half of the three leagues is in alfalfa, and more is being sown. The valuation put on the land is $80 an acre. Last year a half million pesos was cleared from the sale of beef alone, grain and breeding stock not being included.

With land at $70 that will pasture one cow and calf to the acre, with a growing season of ten months of the year, with almost no winter feeding and no grain feeding—let our corn-belt beef cattle men try to think of a cheaper method of growing beef. Those men must feed two months longer, and have therefore lost four months growing season, to say nothing of additional costs in labor, and in rent, and in equipment.

Can they compete with these beef men in the world meat markets? Of course they cannot. On the contrary they must lose ground gradually in their own country. In the year 1914 Argentina shipped to the United States 844,809 quarters of beef, and 140,395 carcasses of mutton and lamb. I am told by the packing houses that pork will be coming in quantities to the United States from here, within a few years.

Let us look at a few figures relative to the live stock industry in Argentina. The valuation placed upon the total livestock in 1895 was $200,000,000, in 1908 $413,021,767, in 1915 $782,000,000 and in 1919 $860,000,000. The total wealth of Argentina in 1914 was officially estimated at $14,614,840,000 of which $7,094,876,077 is invested in the livestock industry. This is roughly divided as follows, land, $3,700,000; livestock and products, $1,375,000,000; instillations and equipment, $429,500,000.

There are in the world, by the latest figures, 427,436,346 head of cattle—123,860,270 being in Europe, 151,520,438 in the Americas, 135,076,355 in Asia, 2,840,940 in Africa, and 14,138,343 in Australia, New Zealand and neighboring isles. By countries, British India (1914), 119,803,365; United States (1916), 61,441,000; European Russia (1912), 34,547,348; Brazil (1911), 30,705,000; Argentina (1914), 25,866,763; Germany (1915), 20,316,948.

Of the 540,353,425 head of sheep in the world, 85,057,402 are in Australia (1913); 49,162,000 in the United States (1916); and 44,855,000 in Argentina (1918). As regards swine, the total number is 167,847,998 of which 68,047,000 are in the United States, 18,399,000 in Brazil, 17,287,211 in Germany. Argentina occupies eighth place with 3,259,945 head in 1918.

This will give you an idea of Argentina's place in the world as a meat producer. A better relative idea can be had from the following calculations. Argentina has 3280 hea dof cattle for each 1000 inhabitants, being excelled only by Paraguay and Uruguay, which have respectively 7506 and 6226 head of cattle for each 1000 inhabitants. The figure for the United States is 622 and for Great Britain, 168.

The story of the improvement of the livestock of Argentina is long, and belongs more properly to a discourse on the market in Argentina for American purebreds. Some idea is also necessary, however, in any effort to appreciate the potentialities of Argentina as a meat producer. Since 1880, Argentina has imported 21,548 head of breeding cattle having a total value of $5,291,869; 83,710 breeding sheep, having a value of $4,115,305 and 3467 swine, with a value of $138,377. In 1895 the number of native cattle in the six leading cattle provinces of Argentina was 12,696,442, of grade cattle 5,337,257 and of purebred cattle 69,357. In 1914 the number of native cattle was 3,635,664 of high grade cattle 15,275,689 and of pedigreed cattle, 379,775 head.

The American packers came about 1910. They have contributed more than any other factor in stabilizing the market and fixing types of market demands. Especially is this true with respect to hogs, which cannot be said to have had a market in Argentina before 1913. Since that time the most interesting portion of all these figures has been the rapid growth of hog growing. It cannot be many years before great quantities of pork will be shipped from Argentina into the United States. Armour and Company alone have completed a plant capable of killing and packing 3000 hogs a day, or three times the present product of Argentina.

HOW MY NEIGHBOR'S TRACTOR LOOKS TO ME

E. M. Anderson,
Chautauqua Co., N. Y.

We haven't any tractor because we have not enough work for one to warrant so heavy an expenditure of cash. But our neighbor has a 12-25 and I'm sure he makes it pay well. I have no accurate figures but he isn't a man who runs in money recklessly. The engine was purchased in the fall of 1918 when every one had lots of grain and threshers were scarce, a second-hand grain separator was bought at the same time, and a neat little sum was cleared immediately from this outfit. It was used for the same purpose last fall, too, but probably was much less profitable because grain was a poor crop and grasshoppers eat up most of what did grow.

By using a 3-plow attachment with the tractor much more plowing was done than would ordinarily have been attempted and it could easily be done so rapidly that crops could be planted at exactly the proper time—a point that can and often does make the difference between success and failure. This isn't a wheat section in any sense whatever but with the aid of the tractor some fine wheat crops have been raised. This man's farm has more hillside than most of us are blessed with, but while affording better wheat land than the flats, a hill is anything but a blessing if it is to be farmed with horses. Right here the tractor surely scores one.

I can't cite specific instances but I remember the tractor is always used in preference to the big team owned by the same man, when heavy hauling is to be done.

Another very appreciable point in favor of the tractor is the fact that farm work is accomplished so expeditiously that, besides getting things done at just the right time, far more leisure is left for recreation. Some one may object, that this is not a practical point, but I would suggest that he put in a few seasons on the farm "pegging away" early and late all summer, with never a minute to spare to go to a picnic or even for a visit, and he will admit that anything that does more work in less time is a very important factor, especially in these strenuous latter years when recreation is becoming almost an unknown quantity to the farmer. When we can all afford tractors and motor trucks and running water and electric lights and furnaces, farming will more nearly approximate the paying basis on which it should stand and which has long been attained by other business; and farmers will begin to resemble free people.

CALCULATING THE COST OF SILAGE

The cost of a ton of silage will vary widely depending on the price of labor, the yield of forage, rent of land, cost of twine, and the like. To figure the cost, the following items should be included:

Land rental,
Manure and fertilizers,
Seed,
Labor growing crop,
Labor cutting crop,
Twine,
Labor filling silo,
Cost of power,
Interest and depreciation on farm machinery,
Miscellaneous.

Cost per acre—
Cost per ton—

Let Your Neighbors Pay for Your Truck

WITH every farmer the purchase of a motor truck should be a well balanced business proposition, rather than simply a desire to keep up with his neighbor.

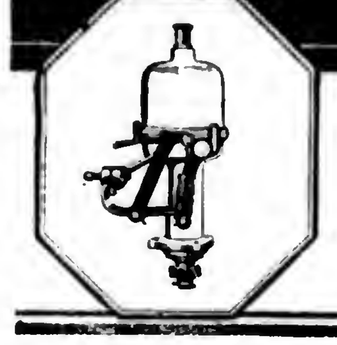
Some farmers make the mistake of buying a truck without having enough actual truck work to keep it busy. Such an investment naturally proves costly in the long run. But the farmer with limited truck requirements of his own can readily make a truck profitable by hauling for his neighbor and serving his community.

With the Clydesdale Farm Special, equipped with the four-in-one body, it is possible to haul grain, manure, cement, supplies, livestock, milk and cream, produce, fruit, and every other kind of a load that can be carried on wheels, more quickly and more easily than with horses. The Clydesdale is powerful and strong enough to carry the average farm load practically wherever horses can go. It is simple to operate so that any farm hand can drive it, and it is economical on fuel and tires, because the Clydesdale Controller insures steady pulling power without waste of gas.

A great many farmers own trucks which their neighbors have helped to pay for, and we have an interesting story to tell any farmer who is considering a truck for his own work or as a co-operative investment. Let us send you full particulars with the name of the nearest dealer where you can see Clydesdale advantages for yourself and learn how other farmers establish fair prices for community hauling.

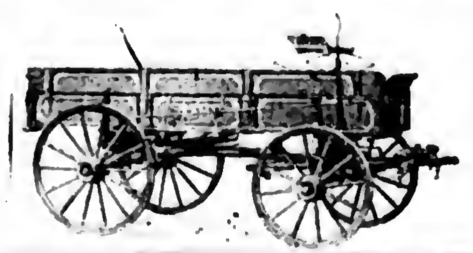
THE CLYDESDALE MOTOR TRUCK COMPANY
CLYDE, OHIO

CLYDESDALE
MOTOR • TRUCKS



"The Driver under the Hood"

—a patented feature used exclusively on the Clydesdale. This device controls the supply of gas to the carburetor, automatically keeping the truck at whatever speed may be set on the throttle. If the throttle is set for 10 miles per hour, the truck will maintain that speed, uphill or down, over rough or smooth road, whether the load is heavy or light, without further effort of the driver except the shifting of gears when necessary.



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Are great factors in every

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Each wagon is equipped with self oiling *National Tubular Axles.*

Ask your dealer to show you an ACME or write us for booklet telling of its merits.

Acme Wagon Co., EMIGSVILLE, PENNA.

HAY
W. D. POWER & CO., 601 W. 33 St., New York are the largest handlers of commission hay in Greater New York; if you have hay to dispose of communicate with them.
HAY

One Man Saws 40 Cords a Day

Easily—At a Cost of 1½ Cents a Cord!

Write today for Big Special Offer and Low Direct Factory Price on Ottawa Log Saw. Strictly a one-man outfit that will *Beat the Coal Shortage* and make big money.

Friction Clutch You pull the lever to start saw blade, push lever to stop; engine runs on.

OTTAWA LOG SAW

Cuts Down Trees—Saws Logs By Power

Does Work of 10 to 15 Men at less than one-tenth cost. Saw makes 310 strokes a minute. Mounted on wheels. Easily moved from log to log and from cut to cut along the log by one man. No more back-breaking cross cut sawing. The Ottawa falls trees any size. As one-third of the tree is in the branches, a specially designed fast cutting branch saw is now offered. Engine also runs pumps, feed grinders, cream separators.

Direct Gear Drives Saw—no chains to tighten; no keys; no set screws. 4-cycle Frost Proof Engine with counter-balanced crank shaft. Pulls over 4 H-P. Oscillating Magneto Ignition and Automatic Governor with Speed Regulator. Special clutch, lever controlled, enables you to stop saw without stopping engine. Simply built; nothing to get out of fix. Uses little fuel. Works well in any kind of weather and on any kind of ground.

"I start and stop saw with the engine running."

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2562 Wood Street Ottawa, Kansas

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AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880 WEEKLY

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Member Standard Farm Paper Ass'n and Audit Bureau of Circulations

PHILADELPHIA, PA., NOVEMBER 13, 1920
VOLUME 48 NUMBER 20

OUR JOB is to serve our readers. Whenever you are puzzled, write to us and we will help you if we can.
—The Editors.

An Old Friend Gone

WE ANNOUNCE with sorrow the death of an old friend of Pennsylvania Farmer, Mr. W. R. McGill, of Crawford County, Pa., in his 88th year. Mr. McGill's friendly counsel and advice was a great encouragement to the new management of this paper when it was purchased in 1911 and later moved from Meadville to Philadelphia. His interest in the paper continued up to the time of his death and was manifested by encouraging letters to the editors and timely articles for its columns.

He belonged to the old school of farmers and had that sterling character which is so frequently found in those who have come thru the hard school of pioneer experience and have succeeded in every worth-while enterprise in the face of adverse circumstances. He raised a worthy family of nine children, gained a competency in life's goods and was a leading influence in the helpful institutions of his community. He goes to his reward crowned with a wreath of good works and kindly memories.

Huge Army Proposed

AS WILL be noticed by an item in our Washington Letter the War Department and the general staff have outlined a program for the establishment of an army of 2,000,000 men. To the lay mind this looks like a piece of unwarranted extravagance. Of course, the training and direction of such an army would necessitate the appointment of an immense corps of army officers; but we would not like to intimate that the prospects of a job would influence the general staff to propose such an additional burden upon the people of the United States. With the unprecedented load of debt on the shoulders of taxpayers—a load that will have to be borne not only by this generation as long as it lives but will be shifted to our children and grandchildren—the proposition has the earmarks of having originated in the minds of irresponsible visionaries. It is to be hoped that the new administration will promptly relegate all militaristic ambitions to the potters' field to lie along side of John Barleycorn.

When Farmers Burn Corn

NEWSPAPERS have been publishing items to the effect that farmers of the Middle West would burn corn next winter for fuel, leaving the inference to be drawn that this action would be taken for the purpose of boosting the price of corn and other grain. It may be set down that any such concl[illegible] did burn corn for fuel once in the past for the reason that a ton of corn could not be sold for enough to purchase an equal amount of fuel in coal. That was in the days when a state of poverty existed in agriculture. Corn may be burned again if a similar condition arises, and the public has no kick coming if it conducts affairs so that it is more economical for a farmer to burn his products than it is to sell them. The first duty of the farmer is to his own household. After the needs there are met the balance goes into commerce, provided it pays to market it. What is called the business world should not forget that farmers are the heaviest buying class in the country and that it is absolutely necessary that their prosperity be maintained if the factories and the railroads are to run to capacity. All that is necessary to assure this condition is that fair prices be maintained for agricultural products.

"What Milk Will Do"

THE WORK of the National Dairy Council in advertising the value and necessity of milk is the beginning of a line of work which may be carried on profitably to almost unlimited extent, and which should be adopted in almost every other line of agriculture. Farmers have not fully realized the possibilities of increasing the sale and use of their products by advertising. The indirect results of the advertising done by canners, packers, makers of prepared foods, etc., benefit producers, but there are a lot of products sold and used as raw materials which could and should be used to a much larger extent than is the case at present. The increased use of these foods would benefit both the farmer and the consumer.

One of the most convincing bits of advertising we have seen recently is a pamphlet issued by the National Dairy Council, "What Milk Will Do for Your Child." It is fully illustrated by photographs and charts made from concrete cases and shows what the use of milk will do to correct the effects of under-nourishment and the attendant deformities. It will prove conclusively to the careless that milk and plenty of it is absolutely necessary to the proper growth and development of children. At this time when the dairy industry is threatened by superficial over-production, the surplus could more than be absorbed if even the children had all they need for best growth.

What is needed is for parents to be convinced thru advertising that milk is necessary to the health and growth of their loved ones and it would be bought.

Another example is that of apples. Growers are alarmed at the big crop in the East and are wondering what they will do with them. There are not too many apples if everybody would use all they could and should. People are better acquainted with the virtues of a certain kind of chewing gum than they are with the health-giving, food-carrying qualities of the apple, and all because the one has been advertised and the other not. Farm organizations might well spend part of their incomes in contributing to a common fund for advertising.

The Election

SELDOM, if ever, have the election returns shown the degree of unanimity of purpose in the American people as is indicated by the unprecedented plurality given to the Republican candidates last week. Because of the unsettled and uncertain condition of the public mind during the past five years and the well known tendency of the public to blame its ills upon the party in power, we believe that the psychological effect of the election will be to allay fear and restore confidence and thus expedite the return of normal business methods. We say this without any comment as to the merits of the case, but simply because it is human nature to be better satisfied when it gets what it wants and in this instance it is evident that the public believed a change of party in the administration of government was necessary.

We hope there will be no misinterpretation of the results of the election by any individual or group of individuals. We believe the people voted as they did more as a rebuke to the spirit of autocracy, real or fancied, than for any other reason, and they will brook it no more in a group than in an individual. The American people believe in the intrinsic virtue of democracy and are as averse to an oligarchy as to autocracy. For this reason the leaders of the party newly elected to power will do well to keep their ears close to the ground if they wish to continue in power. The size of the vote must not be taken as an indication that the people have relinquished their right to direct their public servants.

It is to be hoped that the new administration will adopt at the outset a definite policy for the further development of agriculture. This policy must not stop at efforts to extend the acreage under cultivation. In fact, that is not even the place to begin. President-elect Harding as well as other party leaders showed by their speeches during the campaign that they were fairly well acquainted with the needs of agriculture, and the platform upon which they were elected outlines a program which includes most of the principles for which agricultural leaders have been contending. It is now up to the people to see that they are carried out, should there be any inclination shown not to do so. On the economic side some of these principles are: A law to legalize collective bargaining so that producers may co-operate to the fullest extent in the sale of their products; confirming and improving the Federal Farm Loan law; the creation of a system of personal credits, and the adoption of a plan for furnishing certain and sufficient short-time credits suited to the business of farming. All these are vital to the welfare of agriculture and should be included in the policy adopted.

Now that the election is over it is the duty of every one to lend his or her aid to the job ahead. Never was there a more difficult task for the people of this country and its satisfactory accomplishment will require the intelligent and whole-hearted efforts of all the people. Whatever may have been the differences of party heretofore, the case is finished and the jury has returned its verdict, from which there is no appeal.

Our Washington Letter

The farmers conference on credits at the National Board of Farm Organizations headquarters in Washington, after deliberating and passing a set of resolutions, adjourned and the delegates returned to their homes evidently convinced that if a solution of their problems is reached they must work it out for themselves, regardless of government action. As one of their spokesmen said, "they will attempt to put into effect a gigantic holding movement on wheat and cotton." President Charles S. Barrett, of the National Farmers' Union, declared that "the time has now come for action. Since government has failed us, we now ask that government officials stop talking price decline and give us a chance to help ourselves. Our union officials interpret the resolutions you have just passed as authorizing a general holding movement on wheat and cotton, and possibly other products; certainly on wheat and cotton, for that only will get us anywhere."

The fifteen members of the "Next Step" committee who drafted the resolutions were not all of one mind. Representatives of the radical farmers' organizations were not satisfied because the committee turned down their move in favor of the Plumb plan of government operation of railroads and the alliance of the farmers with union labor organizations. The Washington representative of the National Grange, Dr. T. C. Atkeson, did not sign the committees' report, and has given his reasons in the following statement:

"I told the committee that if this report represented their state of mind to go ahead and present it. I know how hard hit thousands, perhaps millions of farmers have been by the decline in corn and cotton and cattle and other products in lesser measure. But this statement of the committee is based, I am sure, on an incorrect diagnosis of the causes of the illness which at present afflicts us. Incorrect diagnosis and uneconomic remedies always do more harm than good. I am not willing to subscribe to a remedy based on what I believe to be incorrect diagnosis. The curtailment of credits is, in my opinion, only a part of a result, and, not the cause, and does not lie near the cause, of what is taking place. The price readjustment is an inevitable result of conditions due to the war. I went thru a similar situation following the Civil War. What we should do is to get at fundamentals with a more thorough knowledge of conditions and of past experience, and then seek to prevent, if humanly possible the long period of depression, which post-Civil War experience and history indicates is to be feared.

"This cannot be accomplished, in my judgment, by mere creation of credits, especially if the chief use of these credits is to hold back

products from consumption while other products are being raised. It can be accomplished, if at all, by enlarging consumption. Nothing which has been officially suggested in either the earlier conference or in this conference will have any effect even if carried out in good faith, on increasing consumption, except the one suggestion that foreign marekts for American products should be sought out by all such government agencies as are available."

The executive committee of the American Farm Bureau Federation is making a study of the McFadden Rural Personal Credits bill. Prof. Ivan Wright and Dean Eugene Davenport, of the Illinois University are also working on the same bill, in co-operation with the Rural Credits Committee of the National Society of Record Associations. It is assured that some sort of personal rural credits legislation will come before Congress early this winter.

* * *

The Department of Agriculture and Interior Department evidently have not heard of the slump in prices or lack confidence in the belief that lower prices for farm products will be effective in reducing the cost of living in the cities. They are asking for large increases in salaries for workers in the departments. Secretary of Agriculture Meredith is asking for upwards of $10,000,000 more than last year's appropriation for the Department of Agriculture. Secretary of the Interior John Barton Payne is making an insistent demand for pay increases in his department aggregating millions of dollars. Officials in the department now receiving $5000 would receive $7500, those receiving $3500 would receive $5000, and so on thru the long list of employes. The entire estimates for the Interior Department, as sent by Secretary Payne to the Treasury Department, total $226,000,000, an increase of $21,000,000 over last year's estimates.

* * *

The War Department is planning for an army of two million men. According to the plans of Secretary Baker and the general staff, the personnel of the ranks of this huge army is to be provided for by the regular army of 300,000 officers and men; the National Guard approximating 425,000 men, and organized reserves of indefinite strength. The first 2,000,000 men are to be organized into six field armies with the proper number of corps, divisions and auxiliary troops. Reserve equipment and supplies will be provided and an organization for mobilizing the industries of the country. This scheme would give employment to a vast number of training officers and necessitate the maintenance of an immense military establishment.

* * *

Notwithstanding the efforts being made to increase foreign trade, the Federal Reserve banks reports show a further decline in export demand for American products, and lack of new orders. This is due, the banks say, to the fact that the fall in prices of many commodities in foreign as well as domestic markets, with the attendant financial strain abroad, has reduced buying power and caused a slackening in demand.

A question has come up in Michigan as to whether the provisions of the Capper-Volstead farmers' collective bargaining bill will apply equally to the local associations of farmers and the central agency, or overhead organization. The matter has been referred to several authorities by the Washington office of the American Farm Bureau Federation. An assistant in the Attorney General's office said the proposed measure would give any benefits to the central association that were conferred upon the local association. Solicitor Williams of the Department of Agriculture, gave a negative answer. When the matter was referred to Clifford Thorne, of Chicago, the federations' attorney, he advised that the bill be so amended as to remove any doubt as to the intentions and the extent of its application.—Elmer E. Reynolds.

HARRISBURG LETTER

Need of a Program.—The election has given the Republican party such a preponderance of strength in the Legislature that thoughtful men among state officials are commencing to think about a program for the session and of achieving something that will not only be lasting, but put the party into better shape to meet the fight of 1922. History of politics in Pennsylvania has shown that a pronounced victory has always brought dissatisfaction in its train, and if the coming session is to be made a gridiron for Philadelphia politics again, or a background for men seeking personal prestige, history will repeat itself. The great Roosevelt victory in Pennsylvania in 1904 made the Legislature of 1905 tremendously Republican and the Democrats carried the next State election. As a result of the election on Tuesday there will be more Republicans in the two houses than ever known before and it is doubtful whether they will tamely submit to a prolonged session and a marking of time while certain leaders make up their minds as to what shall be done. There will probably be a demand for a legislative program outlined in the first month or so and efforts [illegible] complete it instead of jockeying unti mid-May. The demands for appropriations this year are going to be tremendius and more liable to make trouble than in any session in years.

Constitutional Matters.—It does not seem likely that a constitutional convention will be called as a result of the discussion of revision of the organic law and it is more than probable that quite a few of the propositions for amendment agreed upon this week will be rejected by the Legislature. Pronounced opposition to making changes at this time has come from influential quarters and it looks as though a schedule of important changes would be made up and submitted. These would include home rule, state budget, and a comparatively few other matters. There are signs of opposition already arising to the proposed changes in the minor judiciary.

Success of Apple Week.—Secretary Fred Rasmussen in a final statement at the close of apple week declared he believed the people of the state had received information which would be valuable as to the use of apples as a food, and also to the orchard industry of the state. Mr. Rasmussen received numerous reports indicating increased sales, and in some instances demands were so great that growers sold all they had and were able to fill other orders by buying from less favorably situated growers.

After the Stale Egg.—Secretary Rasmussen has commended the activity of the force of Director of Foods James Foust in moving against grocers and egg dealers who have been selling cold storage eggs as fresh. Agents of the state turned up a surprising number of cases where stale eggs were being old as of the freshest variety and chemists found them decidedly out of line with the state standard. Some of the eggs were months old and the secretary said it was a fraud on the buying public and the farmer as well.

After Delaware Dogs.—This week will see the start of a notable campaign to clear Delaware County of ownerless and unlicensed dogs. The state agents who have been operating in Fayette, Greene and other southwestern counties have moved to the east and in conjunction with Delaware county farmers organizations and other bodies will move against the dogs. It is expected to make a showing that will serve as an example.

Foreign Labor for Farms.—As yet Pennsylvania has receive very little of the anticipated foreign labor for farming, but state and Federal officials who have been sizing up the flood of incoming aliens at New York believe many will go to farms, especially when realization of industrial slowing up occurs. The first relief in the farm labor lines expected in the truck gardens near the cities, but state officials say they plan to expand it.

Motor Money.—Revenue for the State Highway Deprtment from licenses of motor vehicles has passed the $8,000,000 mark, which means that over $7,000,000 has been made available for road maintenance this year. This sum will grow and it will be state policy to continue it in departmental control instead of distributing it to counties where it originates as proposed.—Hamilton, Harrisburg, Nov. 8, 1920.

NEW JERSEY NEWS

Teachers' Conference.—Many prominent students of agriculture were on the program of the conference of the agricultural teachers of New Jersey, which was conducted at New Brunswick for about one week. In his invitation to the event, H. O. Simpson, State Supervisor, said: "The work consists of four general lines—professional lectures, round table discussions, practical agriculture instruction, and lectures on important current topics." Instruction in vocational agriculture in the public schools of New Jersey is an important part of the educational development of the state. This work is now offered in forty-five centers in ten of the counties of the state; it is destined to grow and will mean much to the future generation of farmers. The work is Federal-aided and is part of a nation-wide movement for vocational education."

Prices of Foods.—Fresh eggs are still soaring in price in thfs state. They are now 96 cents per dozen at wholesale, which is a gain of six cents in a week. The retail price is quoted at $1.08 and -1.10 per dozen. Sweet potatoes are now at their best in New Jersey. They are retailing at $1.25 and $1.35 per half bushel, or 15 and 25 cents for two quarts. The wholesale price is $1 for 16 quarts. The best Jersey sweet potatoes can be delivered to a store in the northern part of the state from New York at from $1.75 to $2 per bushel, or, possibly, a little over. At 25 cents per quarter-peck, they bring the retailer $4 per bushel. White potatoes are reasonable in price, retailing for 75 cents per half bushel. Some farmers are selling their hogs alive at 15 cents per pound. In some parts of the state thousands of bushels of apples have been moved out of the growing centers, while thousands of other bushels have been ordered from the cities. The apples have netted the growers from 90 cents to $1 per bushel and have been purchased by consumers at 80 cents per 16-quart basket. This situation developed thru a plan of distributing apples from the orchards in North Jersey direct to consumers thru women's clubs, municipalities and chambers of commerce . The plan is said to have been very successful up to the present time. Previous to its introduction the farmers were receiving net around 75 cents per bushel and consumers were paying $1.25 and $1.50 per half bushel basket.

"Farmer's Week."—This great event will be observed in Trenton from January 10 to 14 next. The State Horticultural Society and other farm organizations will conduct sessions during the week, either at the State House, Normal School Auditorium or some other central point. One of the main features of the convention will be a commercial fruit and vegetable exhibit of a scope never before attempted by growers in Jersey. Two new members of the State Board of Agriculture will be elected at the opening of the convention, and after the business of that part of the week has been completed, other organizations will hold their annual or special meetings. The State Board with the co-operation of Trenton organizations will act as host to the societies, and halls will be provided for the separate convention of each association. The big fruit and vegetable show of the horticulturists will be staged in the armory of the Second Regiment—an ideal spot for such an exhibition. Among special competition will be one for the New Jersey State Chamber of Commerce cup valued at $200, which will become the property of the grower who wins it three times. There will be a special booth for demonstrating the use of apples. One of the most interesting booths to a public interested in costs of food products will contain an exhibit by Alexis L. Clark, chief of the Bureau of Markets of the State Department of Agriculture.—Kelly, Trenton.

NEW YORK LETTER

Farmers' Election Victory.—Daylight saving and other oppressive agricultural measures resulted in a sweeping overthrow of the party policy that has ruled the entire state on Tammany lines for the past two years. Rural sections all over the state put out a more solid vote than ever before, even though the Tammany element tried to protect itself with a farmer candidate for Lieutenant-Governor. Upstate voters will now work for a separation from New York city before another gubernatorial election.

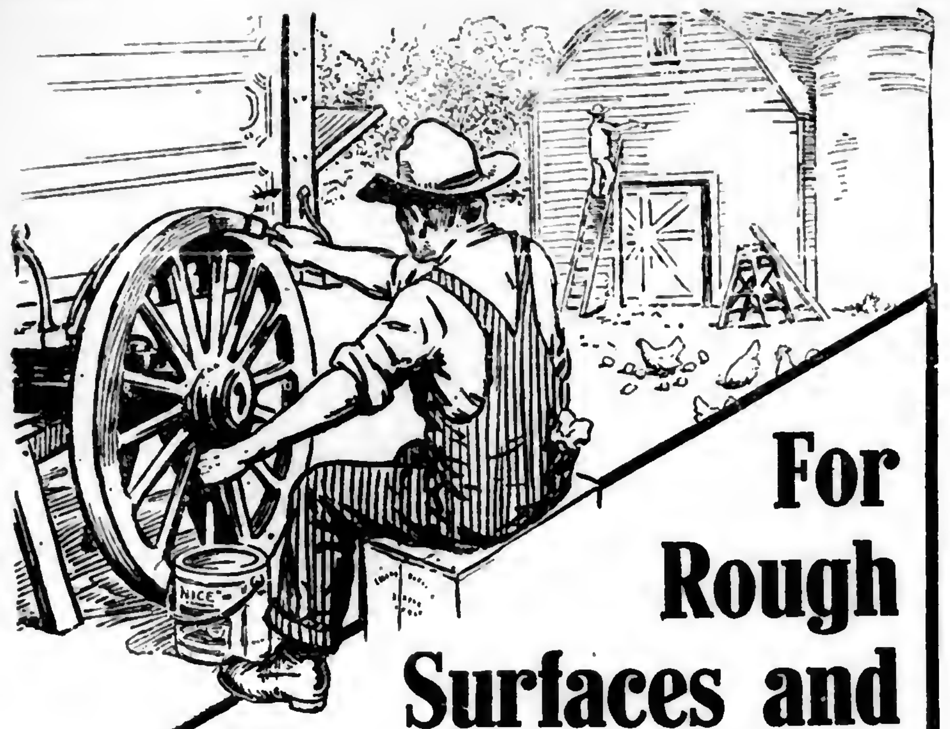
Dairymen's Three-day Convention.—On November 16 at the armory in Watertown the New York State Dairymen's Association will confer on problems of the day. The entire milk outlook, with recent developments in the liquid milk field, will receive attention. Speakers will include Geo. E. Hogue, commissioner of agriculture; Bradley Fuller, president of the League's Co-operative Association; H. E. Cook, former dean of agriculture of the St. Lawrence University; Ole Salthe, director of bureau of foods and drugs of New York city, and I. Elkin Nathans, secretary of the Milk Conference Board, in the dealer's association. The Farms and Markets Department's counsel, G. L. Flanders, will talk on agricultural law and cheesemaking will receive attention in two sessions, with H. L. Richardson and H. A. Reese, both of Lowville, as speakers.

Farm School a Success.—Watertown bought a farm and placed its truant boys on it. Truants from all over the state have been sent there, as there are few institutions of the kind in the state. The boys are getting a complete course in agriculture. An appropriation is now sought to enlarge the accommodations so as to house all the boys the 57 acres will support. Also to enlarge the farm. There should be more such institutions in the state, or larger ones.

Certified Seed Potato Supply.—Heretofore the country's supply of certified seed potatoes has been sufficient to supply only the state's adjoining the ones growing the seed, little going south of New Jersey. This year Maine and New York alone have a 200,000 bushel surplus available. In New York there are fifty per cent more certified seed potatoes than in 1919, or about 175,000 bushels. About two-thirds of these are of the Green Mountain type, and one-fourth of the Rural type, the balance being mainly American Giants and Irish Cobblers. Most of it was grown in Cortland, Washington, Clinton, Oswego and Onondago counties.

Farmers' Greatest Problems.—Farm leaders of the state, after a week's conference in Ithaca, agree that the chief problems of farmers are now economic, such as marketing, transportation, finance. Actual farm practice is their least bother now, since the excellent work of the Farm Bureaus along this line. In future, attention will be focussed in solving these economic questions. The state lead the country in the production of many foods as apples, potatoes, many vegetables, milk. Yet many many other states excel us in marketing so that our home grown foods go begging in the cities of our own state.

Milk Strike Threat Effective.—The dealers in liquid milk have mostly come to terms on November prices, as they found they could do nothing with the producers who stood firm for [illegible] their agents were instructed to ask, [illegible] per cwt, or the same as [illegible]



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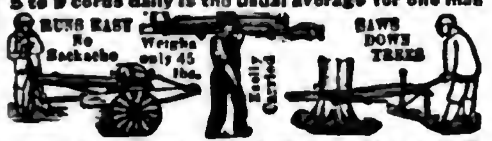

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You Can Afford a Farm in Fertile Ontario or Quebec

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If your means will not permit you to buy an established farm, Ontario and Quebec offer great fertile regions where the pioneer can hew out a home for himself and family—where prosperity and independence are to be won by those who will put forth the effort. Every branch of agriculture may be followed in these Provinces; dairying and stock raising are particularly successful.

For illustrated literature, maps, etc., write Department of Immigration, Ottawa, Canada, or

F. A. HARRISON
200 N. Second St., Harrisburg, Pa.
Canadian Government Agent.

DAIRY

DAIRYING IN NEW ZEALAND

Price of Dairy Farms

Visitors to New Zealand are frequently surprised at the high values for the dairy farms and wonder how men are able to make a living on land valued in some cases at $500 an acre. The genial climate and the fertility of the soil permits the keeping of cows on pasture the year round. In the dairy districts in the North Island more and more alfalfa is being grown as it has proved most satisfactory for cattle feed. There is no housing of dairy herds, no expensive hand feeding, no provision to be made for a long, hard winter. Where winter feed is provided it is chiefly in the shape of inexpensive root crops, to which the cows help themselves, and hay, which is generally scattered in the pastures. The expensive cakes and meals and other foods necessary in North America are practically unknown in New Zealand. It is recognized that with butter fat selling at $0.36 per pound, a capable farmer can make a good profit out of land at $500 an acre.

If land will carry a cow to 3 acres it will sell for $100 to $145 per acre, according to its situation. If 2 acres are required to feed a cow a year round, $194 to $243 per acre is a common price. To reach $500 an acre land has to carry about a cow to an acre the year round. There are many farms in New Zealand selling today at a much lower price than $500 per acre, and plenty of land can be obtained in the back country, which an energetic farmer can turn into dairy land, as low as $50 to $100 per acre. It is generally recognized that the farmers on the high-priced land are, on an average, more prosperous than those on low-priced land. Not only is high-priced land better, but is generally farmed better and carries better stock.

Yields of Dairy Farms

In isolated districts where suppliers are few and scattered, butter fat sells from $0.32 to $0.36 a pound. In well-established districts where suppliers are numerous and factories large, and particularly where dried milk and casein and similar products are made, it ranges from $0.36 to $0.48 per pound. The average cow in New Zealand yields about $58 per year from butter fat alone, disregarding the returns from calves and skim milk. Many herds in New Zealand are yielding an average of $97 to $141 per cow, and plenty of individual cows yield from $243 to $291 for butter fat. In really good districts returns of $97 to $141 per acre have been obtained. On returns like these it is easily understood how dairy land sells at $500 per acre.

Labor is scarce and expensive, and the dairy farms are run on much less labor than in most other countries. A dairy farmer and two boys by the use of dairy machinery can handle a herd of 60 to 70 cows. Since the cows are fed on grass little labor is required outside the milking shed, and as in many cases the dairy factories arrange for the collection of cream and sometimes milk, little time is wasted in delivery.

FOR A GREAT DAIRY CONGRESS

From time to time, for ten years preceding the European war, there have been held in Europe, great Dairy Congresses. Each Congress has been attended by a very small number of American representatives. It has seemed to those familiar with the work, and the benefits of such a Congress that one should be held in America. You may recall that preliminary inquiry was made last year. It resulted in indications that the time was not right for pushing the matter. At this year's show, the presence of representation from a dozen foreign countries aroused renewed interest on the part of the representatives of various National Dairy Organizations as could be found on short notice.

The comittee referred to above is of the opinion that because the next session of Congress is a short one, immediate steps must be taken to secure the authorization of Congress for an invitation to foreign countries to participate formally in such a conference.

That to secure this authority, the industry must have the assistance of the State Department and the U. S. Department of Agriculture. The committee requests you, or some one representing your organization to immediately wire the Dairy Division, Washington, D. C., expressing your belief in the desirability of the holding of such a Congress, and indicating your personal disposition to do anything you can to help secure from Congress, the necessary authorization. H. E. Van Norman, Pres. Nat'l. Dairy Assn.

Modern Stactions and Concrete Troughs Make Dairy Work a Delight

HERDS TAKEN FROM ACCREDITED LIST

Since the beginning of the work about three years ago the United States Department of Agriculture has removed 74 herds of cattle from the list accredited as being free from tuberculosis. The presence of one or more reactors was the cause for removal. The number of herds taken off the list is small compared with the total number of accredited herds, which now exceeds 4000. The Federal Bureau of Animal Industry makes it plain that the list includes the names of only those persons who keep tuberculosis out of their herds.

In most case where reactors were found among cattle which had passed the requisite number of official tests, reinfection was traced to carelessness. Either the accredited animals had been permitted to run in pastures with infected cattle or else animals of doubtful health had been brought on the premises and stabled with the others. This is in violation of the agreement which the owner signs when he applies to have his herd tested. In one instance a breeder with an accredited herd purchased an entire herd whose history he knew little about. About half of the animals bought reacted to the tuberculin test when it was applied. But instead of segregating for a time those which did not react, he immediately added them to his officially accredited herd. This was one of the herds taken from the list following the discovery of several reactors.

"The breeders must realize," a bureau official declared, "that if they take chances, tuberculosis is likely to gain a foothold again and if it does the herd can not stay on the list." In only 5 instances out of the 74 "discredited" herds the presence of reactors could not be explained. This is considered a small number in proportion to the nation-wide extent of the work.

MILKING SHORTHORN RECORD

A new butterfat record for Shorthorn cows has been made by Snowdrop, a white eight-year-old cow, owned by Sherwood Farm, New Jersey. During the year ending Oct. 20, 1920, she gave 15,500 pounds of milk, testing 4.45 per cent, 691 lbs. of butterfat.

Snowdrop's largest yield of milk and butterfat in any month was in December, 1919, when she gave 1608 pounds of milk, testing 4.364 per cent, 70 pounds of butterfat. She gave over 50 pounds of butterfat during every full month of lactation, except the last, September, when she fell less than two pounds below the mark. She was kept under practical farm conditions, being out of doors every day during the winter except for two of the stormiest days, and being outdoors day and night after the middle of April. She was on poor pasture for a month prior to calving, receiving no grain.

Lives there a mother with soul so dead that she is content to cater only to her children's physical wants, forgetting the need for good books, good magazines, and most of all her companionship in those precious years when minds are quick to make impressions that last thru life?

Instead of being concerned that you are not known, seek to be worthy of being known.

Whatever Roughage You Grow there's a TI-O-GA Dairy Feed to form a Balanced Ration with it.

Crop rotation and different kinds of soil make it necessary to grow different kinds of roughage. Roughage varies in nutritive value and to properly balance it with the grain ration so that cows will always have the right amount and proportion of nutrients, is the most difficult problem in dairying. To accomplish it economically is the work of an expert and he must have access to all available supplies of feed.

TI-O-GA FEED SERVICE

accomplishes this for the feeder by employing the best feed expert obtainable and by drawing supplies from all available markets; thus maintaining the required standards at the lowest cost.

Red Brand TI-O-GA Dairy Feed to be fed with low protein succulent roughage: Silage, Pasturage, Green Fodder, etc.

White Brand TI-O-GA Dairy Feed to be fed with medium protein dry roughage: Timothy Hay, Mixed Hay, Corn Fodder, etc.

Blue Brand TI-O-GA Dairy Feed to be fed with high protein dry roughage: Clover Hay, Alfalfa, etc.

In each case the cow gets the same amount of nutrition in the same nutritive ratio and you get more money from your roughage. If your dealer does not have the kind of TI-O-GA Dairy Feed to balance your roughage, advise us and we will arrange for some nearby dealer to supply you.

Our book on *TI-O-GA Feed Service* and explanation of how the three feeds give the same results, sent free on request.

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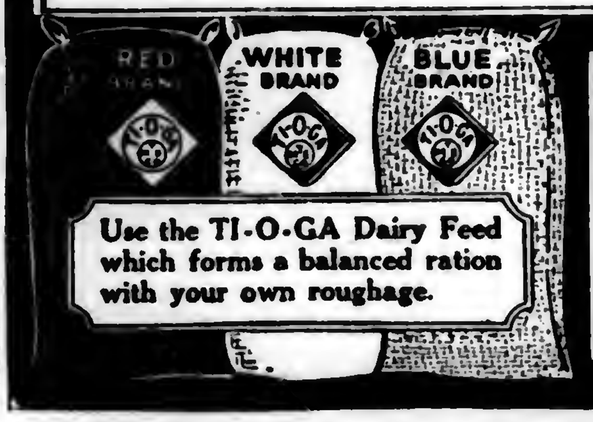

Use the TI-O-GA Dairy Feed which forms a balanced ration with your own roughage.

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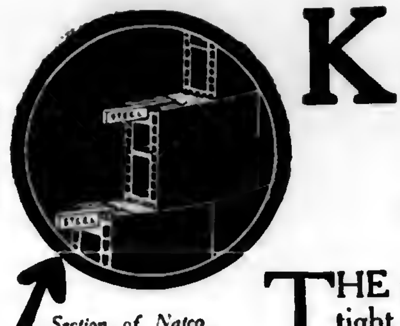
Section of Natco Silo wall showing still air spaces and steel reinforcing

Keeping Silage

THE perfect silo must be absolutely air-tight, since air causes silage to mold and rot. The glazed tile walls and tight-fitting cypress doors of Natco Silos seal the silage like fruit in glass jars. It comes out sweet and succulent to the last forkful.

Natco Silos

are strongly reinforced with high grade steel bands, doubled in the bottom courses where the pressure is greatest. The double-shell tile also increases the wall strength and provides for secure mortar joints. The still air spaces conserve the natural heat of the silage—resist frost. Heavy galvanizing protects all exposed ironwork.

Ask your building supply dealer for prices on Natco Silos. Write for FREE book, "Natco on the Farm."

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HORTICULTURE

PREPARING AND MARKETING SWEET POTATOES

In South Jersey in the past it has paid farmers well to store sweet potatoes under heat and place them on the market when prices rule higher during winter and early spring. Marketing the sweet potatoes does not interfere with the other routine of the work and comes at a time when indoor heat is a luxury. Before placing the sweet potatoes in storage they must have their full growth. In this section that means about the 10th to the 12th of October. At this time the potatoes are graded into baskets from the field and either placed in bins or containers such as crates or bushel hampers in a heated house at 85 degrees Fahrenheit. Tubers showing evidences of stem or ground rot or are spotted or any other defects apparent are placed into separate baskets and sold as soon as possible.

Careful handling of the potatoes is necessary in order to keep the crop well. They should be handled with care in the field and in loading to prevent bruising. When brought to the house if dumped the basket should be brought right over the place it is desired to have the potatoes in the bin and overturned slowly. Bins are made small so that once a bin is marketed it can be done quickly as potatoes begin to decay when handled. After all the potatoes have been in the house ten days the temperature is gradually dropped from 85 degrees to 55 degrees Fahrenheit.

When all potatoes are in the house the local markets are watched. Many grocers will be willing to handle the whole crop if the grower will deliver a certain number of baskets at certain intervals as he needs them at a stipulated price for all. If this plan will give a fair profit it is a wise plan to accept.

In our section the growers keep a sharp lookout on Philadelphia and New York quotations and as soon as the price of the tubers appear attractive shipments are started. There is seldom a glut of sweet potatoes in the market during winter months. Sometimes if the weather is severe potatoes arrive on the market in poor condition, or if a cold snap has lasted some time more potatoes than usual may appear on the market but then the market is usually in need of a good supply and most are sold at fair prices.

When shipping tubers are removed carefully from the bin, care being taken to disturb those below as little as possible. These are regraded. Uniformity is sought to make the package as attractive as possible. Bushel hampers are nearly always used. Successful growers have some method of cleaning the potatoes before packing them. One of our neighbors, a man who has made most of his money on sweets, has a large screen made, the potatoes are placed on the screen in a layer and brushed off. Then they are turned over and brushed again. This is quicker than wiping each tuber off separately as most growers do. Newspaper is lined around the inside of the basket, and a flap turned over the rim to cover the top. The potatoes are packed by hand into the hampers as nearly one size as possible. Beginning around the rim the potatoes are continued in a circle to the center. When the hamper is finished it presents a nice appearance. The top should be the same as the bottom, and if this is continued over a number of years your potatoes will bring the best price. When packed into barrels the same circular method of packing is used and the barrel lined with heavy paper. The truck barrel cannot be used now as it is ruled out by the railroad commission. There is a barrel made at the present time stronger than the truck barrel which the railroad company will accept. Some of the growers huckster out part of their crop in the nearby towns during the winter months when weather will permit with other winter vegetables.

Sweet potatoes bring the highest prices from the first of December until the early part of March. The Yellow Jersey is the favorite in this section. Some of the growers prefer the red skinned variety.

When the potatoes are removed from the house they are placed in either a covered wagon or in an open wagon well covered to prevent chilling. One of our successful sweet potato men carries a canvas cover on cold days and when his potatoes are placed on the platform they are covered with this canvas to prevent chilling. A separate car is run to take these shipments by the railroad. When they arrive at the other end the care they receive is sometimes more or less indifferent. It is often hard to find shipments placed on glutted freight stands and they are often placed where the winds soon chill them and decay soon starts in chilled tubers impairing their quality. It is therefore important that the grower take every precaution to pack his potatoes warmly before shipment.

Many farmers carry their sweet potatoes by truck to Philadelphia and New York. These are either sold on the curb markets or taken to the commission house. This method insures the potato arriving at destination in good condition. The cost is reduced as these potatoes are carried in baskets, and baskets are returned. Cost of freight and cartage are also saved toward the operation of the truck. Arrangements can be made with the commission man to phone when he is out of sweets and a load rushed to him as soon as possible.

Knowing your product he can sell to a buyer sight unseen knowing your protatoes are on the way and tell the man he may have the potatoes within a few hours.

When selling on the curb the ten per cent commission is saved but few farmers do this as the weather is usually too cold for comfort.

Some farmers sell directly to the stores obtaining a slightly higher price than when sold either on the curb or with the commission house as potatoes are delivered. Stores some distance from the commission district will often pay well to have potatoes delivered to them weekly. We did this one winter when weather was mild and a fair profit was made.
—James E. Toomey, Gloucester Co., New Jersey.

The Chas. M. Smith Family, Truckers of Mifflin Co., Pa.

TRUCKER RAISES MORE THAN FRUIT AND VEGETABLES

The picture of the Chas. M. Smith family, of Big Ridge Truck Farm in Mifflin Co., Pa., shows that this famous trucker raises more than fruit and vegetables on his farm. A healthier group could not be found in the state. Like their enterprising father, every child is a hustler, and has been a great help during the past summer.

This has been a most successful season for Mr. Smith, and seldom, if ever, have vegetables of such fine quality been grown here. To say "wonderful crops," is putting it mildly.

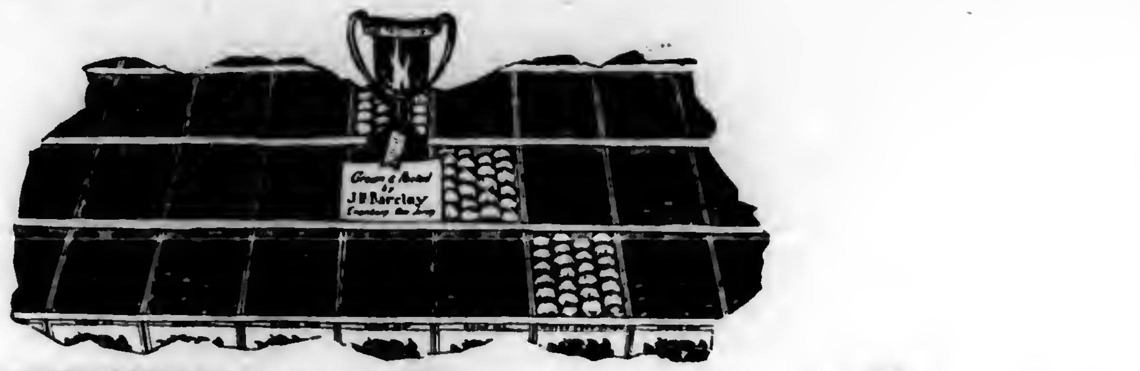
AGRIGRAPHS

Store squash and pumpkins in a dry warm place not far from the furnace in the cellar or near the chimney in the attic.

A tip which may mean money to you when selling your timber: Get bids for your stock both by the lump and by log-scale measure, if practicable.

No matter how modern the farm machinery may be, it isn't a modern farm if the house hasn't modern conveniences.

Death warrants can be issued on unimpeachable evidence for cows whose records have been studied in cow-testing associations.



The Complete Dormant Spray
—makes better quality fruit

IN almost every fruit section there are a few fruit-growers who produce better fruit and get a better price for it than their neighbors, and who also take the prizes at the fairs and fruit shows. Many of these skillful orchardists long ago selected Scalecide for their dormant spray—because Scalecide not only controls orchard pests controlled by other dormant sprays but does many things that no other spray or combination of sprays can do. Scalecide is becoming known even more for its invigorating effect on trees and its effectiveness in controlling other orchard troubles than for killing scale. Its invigorating effect is noted in increased terminal growth; larger, darker foliage on bearing trees; and the holding of the foliage later in the Fall, thus accumulating starch and sugar which results in a plumper and stronger fruit spur. Scalecide kills insects, eggs and larvae of insects, and diseases that winter on the trunk or branches of the tree. It kills the hold-over cankers which cause fire blight, makes the old diseased bark peel off, and allows a new cambium to form. It kills the adults and controls Pear Psylla when applied in the Fall or on warm days in the Winter. (It is too late after their eggs are laid in the Spring). It kills aphis, too, when used as a delayed *dormant* spray.

Scalecide Requires Less Labor

One barrel of Scalecide, which makes 800 gallons of spray, will cover, until they drip, as many trees as three and a half barrels of lime-sulfur, which make 1600 gallons of spray. And of course you can apply 800 gallons of Scalecide with much less labor than 1600 gallons of lime-sulfur.

Scalecide Is Pleasant To Use

Scalecide is soothing, healing and antiseptic to skin of man or beast, whereas lime-sulfur is caustic and disagreeable. Scalecide does not injure even the eyes. It does not corrode the spray pump nor clog the nozzles, and being an oil, it makes the pump run easier and last longer.

Every Claim Has Been Proved

Every claim we make for Scalecide has been proved in our own large orchards, which now total 26,000 trees, and verified by growers throughout the U. S. We speak to you from 10 years' experience as fruit-growers, and our recommendations are based upon profitable orchard practice.

Avoid Disappointment—Order Scalecide Now

If there is a dealer in your section, ask him to reserve enough Scalecide for you. If there is no agent near you, write for our booklet, prices and guarantee, and give us the name of your dealer. Use the coupon below. Address Dept. 27

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Manufacturing Chemists

SCALECIDE
THE COMPLETE DORMANT SPRAY
"Makes a Tree Outgrow Its Troubles"

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Gentlemen: Please send me prices, copy of Guarantee and free booklet on Scalecide, "Figuring the Cost of Spraying." I have............ (number)
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(number) (number) (kind of dormant spray)
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Apollo Metal. Use it on the roof—the walls—"needs no paint." It will outlive galvanized iron or steel.

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Guided by 35 years' fruit-growing experience, we have selected 12 standard apples.

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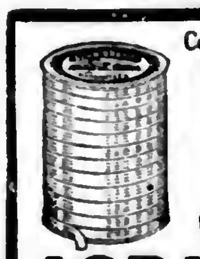

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Gives a soft, brilliant, glowing light; restful to the eyes; an ideal illumination.

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Because of the uncertainty of the market you can only be sure of getting highest prices when you ship to a long established house.

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HIGH-GRADE NEW YORK STABLE MANURE
Carload shipments on Pennsylvania and Reading Railroads

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CAN YOU CAN MEAT SUCCESSFULLY?

For the past four years I have used the first method published by the New York State College of Agriculture for canning meats of all kinds. During that time I have canned beef, pork, chicken, heart, tongue, ham, etc., and have never lost even one can. Then I have worked out a rule of my own for canning lamb chops, which has worked equally well.

It is now the time of the year when we begin to get ready our winter meat supply. And particularly is it the time to can all the cockerels one does not wish to winter or to sell. Nothing comes more acceptable on the emergency shelf or at time for the family feeding and Sunday dinners than a can of chicken, especially when time is limited.

I dress and clean the chicken, and after I cut it up, I pack each piece firmly in quart cans, putting in bones and all. It is surprising how much can be thus stowed away in a single can. I do not add a particle of water, but I put in a teaspoon of salt per each quart can. Then I put on the can rubbers, and screw the tops on loosely, set the cans on a false bottom in a container that has a fairly tight cover, pour in cool water to come well up to the necks of the cans, and after the water about the cans has reached the boiling point I boil it for four hours. Then I tighten the covers of the cans and let them stand in the water until cold, then take them out and dry and carry them to the cellar. I keep them in a dark place.

An Interested Reader of Pennsylvania Farmer

(Editor's Note—We think you will find it easier to tighten the can covers if you will lift the cans out of the water bath as soon as the boiling period is ended. You can do this very handily with one of the duplex forks made on purpose for gripping just under the can shoulders. Then you can get the boiler out of the way and your cans into the cellar so much quicker, for the cans will cool more quickly out of the water than in it. Also you can at once test the seal by standing the cans on their heads; if any liquid oozes out the seal is not tight, and it can be at once corrected, possibly by merely another turn of the cover to press it more deeply into the rubber still soft with the heat. You could not do this so well if the cans have stood until the rubbers are cold. And you might make the leakage worse by trying to tighten a cold rubber, which is of course hardened. Further, if the leakage can not be corrected by giving the cover another turn, you will have to slip on another rubber, which must have been kept sterilized by immersion in a hot bath, in which case it is quite necessary that the can contents be still very hot in order to kill any mold spores that may drop into the can while you are putting on the extra rubber ring. The instructions usually say to resterilize for a few minutes any can which has to have rubbers thus adjusted after the cooking, but we have found that if care is taken to take the extra rubber from a hot water bath, and to lay the cover in hot water while adjusting the rubber, and work very quickly, there is little likelihood of trouble spores getting into the cans which the heat of the can contents will not render harmless).

Farmers will soon be having a goodly supply of fresh meats to take care of. By using Cornell methods No. 1 and No. 2, which I am about to give, any cut of beef, pork, mutton, veal, etc., can be canned while fresh, thereby saving the housewife many a large meat bill thruout the year.

Method No. 1

Free the meat from the bones and cut it into pieces of a size that will go into the cans easily. Pack the raw meat solidly into the cans, making sure that you have clean cans, and that the covers are in a condition to make a perfect seal likely. (Editor's Note—Use only rubbers that have some elasticity, and that will bend back on themselves without cracking, for only such good rubbers will stand up under the long cooking necessary for processing meats). Fill the cans to three-fourths inch from the top, sprinkle over the top of the meat one teaspoonful salt per quart and do not put in any water; if liked, seasoning of celery leaves, onions or pepper may be put in; Adjust the rubbers, and screw the covers on loosely, set the cans on the false bottom in your wash boiler (or if you have only a few cans, use a tin sap bucket), pour in water to come well up to the necks of the cans, and cook four hours from the time the water about the cans begins to boil. Then lift out and seal by turning the covers down just as tight as you can, at once, while the rubbers are soft and hot.

Method No. 2

Sear the meat in a hot oven or in hot fat, then steam or boil it until it can be torn apart. Then pack it into jars, adding one teaspoon of salt per each quart can, and sterilize for three hours in the water bath, as for Method No. 1. Unless the meat is browned in the searing it does not have so good a flavor as that packed raw into the cans, then processed as directed in Method No. 1.

By using Method No. 2, and removing the bones from chicken, much more can be packed into each can. This is quite an item in saving can space.

Steam Processing

Our county home demonstration agents in New York state are demonstrating the varied uses of steam pressure cookers, not only for canning, but for cooking meats for every day meals.

My Method for Canning Chops

Pork chops, lamb chops or any nice steak can be canned very nicely this way: Remove all bones, cut the pieces of medium sizes so that they can be readily forced into the mouths of the cans, and fry them only slightly on each side. Then pack the pieces firmly into the cans until no more will go in, cover with hot melted fat, and seal. Turn each can bottom side up and leave until cold. The melted fat, having become cold, has formed a thick coating in the top of the can which completely seals it. I usually set my caps thus sealed bottom side up on the shelves in the cellar to preserve the seal. When I wish to serve the chops, I fry them a little more, and serve as I would fresh chops.

All my chicken stock, which I make by simmering the bones and trimmings in salted water until the meat drops from the bones, I use for canning various soups made of different kinds of vegetables. I sterilize these cans of soup in the water bath for two hours to insure their keeping.—Maude Blancher, Broome Co., N. Y.

COOKING BONES

In these days of high-priced meat we have learned to make the meat flavor go as far as possible, and have found that the flavor and nutriment in bones a very great help. When meat is thoroughly done, even to the point of falling off the bones, the bones will still yield a lot of food if cooked longer. To be sure, one cannot afford to run an oil or gas stove several hours to make bones yield up all their valuable properties. But the fireless cooker will do it very nicely, and every housekeeper should have one.

However, lacking a fireless, if the kettle is brought to the boiling point over the full blaze, then placed over the simmering burner, with the blaze turned as low as possible, the few tiny jets of flame will keep the kettle contents simmering at just about the right pace, and will not add much to the cost of the fuel.

If there is no such simmering burner on your stove, there is still another. When cooking something else, put a pie of tin or sheet iron under the kettle, having it large enough to hold both kettles at once. Get both of the kettles to boiling, then let the one directly over the blaze cook fast, while the other with the bones in will simmer fast enough at one side of the piece of sheet iron.

When bones are large they should be cracked into pieces, so that more surface will be exposed to the hot water. The food value of bones is in the fat and gelatin which they contain. The fat is brought out in a short time, but the gelatin requires long slow stewing to extract it. As we ordinarily cook bones, the amount of water used thins the gelatin so that it seems hardly worth while, but the extra amount brought out by the long cooking will stiffen a surprising amount of water.

Unless the meat is very lean the marrow fat should be removed before the meat is cooked. Then it can be thoroughly "tried out" and used anywhere where one likes to use butter in cooking.

The stock obtained from the bones can used for soups, stews of various kinds, in sauces to serve with meat, as the wetting for baker hash, and with the addition of finely chopped celery, onion, and carrot and browned flour, it makes a most delicate gravy to use when no meat is served.

Chicken and turkey bones seem so small that few housekeepers try to do anything with them, yet they contain valuable food elements. Cover the bones of a three or four-pound chicken (which has been roasted) with two quarts of cold water, and cook as slowly as possible for five or six hours. The water will then be reduced about one-half, and will jelly like aspic, and may be used for a variety of cookery purposes. The bones of a turkey, well broken up, and cooked eight or nine hours in a fireless cooker, or less, on top of the stove, will yield a stock that is excellent for making sauces to serve with meat; or the remnants of the turkey may be finely cut and added to the stock to make jellied turkey.

Good Chop Suey.—The remains of any fowl and the stock made from the bones makes excellent chop suey. Cut up the left-over meat, and brown the pieces in butter in which a little onion has been tried. Cut sufficient celery from the outer stalks that are not so nice for serving raw, add enough of the bone stock to cover the meat and celery, and cook very slowly until the celery is tender. Serve with boiled rice, that has been boiled in enough rapidly boiling water so that the kernels will not stick together, and dress with gravy made from browned flour and some of the bone stock; or better, if you can get at your grocery a bottle of the Chinese soybean sauce, which is salty, use that instead of the gravy. This soy sauce is a rich dark color, and very pleasing in flavor.—Mrs. H. M. Woodward.

Proper Food and Plenty of Sleep Makes a Baby Good-natured

TO MAKE SAUER KRAUT

With plenty of good cabbage on the market, and available at fair prices, it is a good plan for housewives to convert some of it into a supply of sauer kraut for home consumption, according to Miss Pearl MacDonald, professor of home economics extension in the Pennsylvania State College school of agriculture. An ordinary measuring cup full of salt is sufficient to use in making five gallons of kraut which is ordinarily a sufficient supply for the average family.

Solid heads of cabbage should be cut fine. Put about a two-inch layer in a five gallon crock and sprinkle a little of the salt over it. Take a wooden potato stumper, or similar pounder, and pound the cabbage until it is somewhat juicy. Add successive layers of cabbage with sprinklings of salt and pound until the crock is filled to within two or three inches of the top. Put a plate over the top, weight it down with a clean stone, cover with a cloth to keep out the dust and set in warm place until it ferments. The fermentation will take several days. When fermentation is complete put a piece of cheesecloth, slightly larger than the surface of the cabbage, directly over the top of the kraut, and replace the plate and stone. There should be enough liquid to cover the plate. If a scum appears it does not mean that the liquid should be discarded. When removing kraut, turn back the cloth and prevent the scum from coming in contact with the kraut. Always keep the plate and stone on the kraut.

MAKE SOME BOILED CIDER

With the largest apple crop in four years, farmers are naturally concerned as to the disposition of their unmarketable apples. Necessity for proper grading and packing will leave the grower with a greater excess than usual. A suggestion for a possible way out of the difficulty is an increased use of the old farm method of boiling and sterilizing fresh cider for home consumption.

Boiled cider is useful during the winter not only as an excellent beverage, but for making mince meat and apple butter. In preparing cider for later home use, it is first brought to a boil and skimmed. It is then placed in jars or bottles and sterilized by the usual cold pack method, keeping the containers in boiling water for 15 or 20 minutes, when the containers are sealed.

Make some apple syrup, too—boiling to a syrup before sterilizing will concentrate a most valuable food product. Any fruit juice prepared in this manner is highly nutritious, and may be diluted with water when used.

HATTIE'S LETTER

Just see my letter, friends,
  Its one I wrote today
To send to papa dear,
  Because he's gone away.

Don't you think he'll smile, when
  The postman hands it out
And he will read the news
  That I have written 'bout?

I told him we's all well,
  Except my dolly dear,
But she has caught a cold
  And may have croup, I fear.

I told him baby fell,
  And bumped her little nose,
And that she's worn her shoes
  All out across the toes.

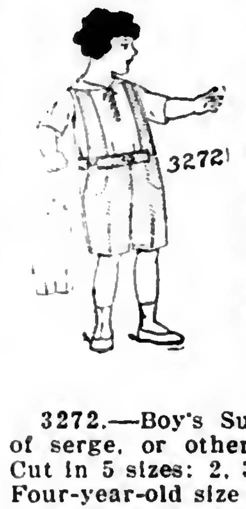
I told him cook was cross
  And scolded me today,
'Cause when she made the pies,
  She said I's in her way.

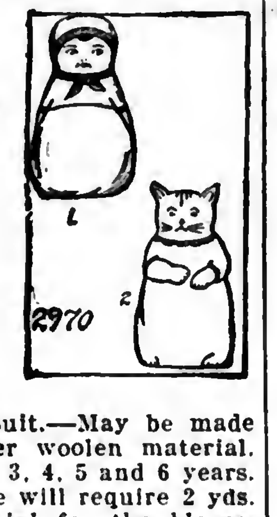
And I wrote, "Papa, dear,
  Please come home right away,
Because I miss you so
  That I could cry all day."
Submitted by—
  Myrtle G. Huber, Chester Co., Pa.

Try hot vinegar when you make your next mint sauce.

PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

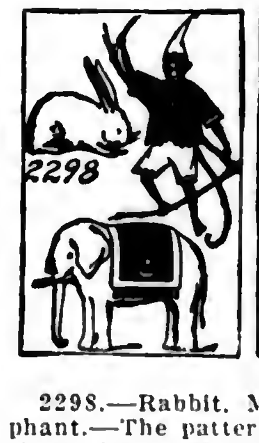


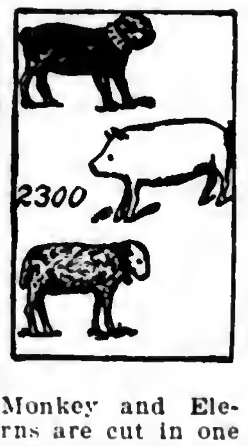


3272.—Boy's Suit.—May be made of serge, or other woolen material. Cut in 5 sizes: 2, 3, 4, 5 and 6 years. Four-year-old size will require 2 yds. of 27-inch material for the blouse, and 2⅜ yds. for trousers. Pattern, 10 cents.

2970.—Roly Poly Doll and Cat.—Toweling stuffed with cork would make these models floating toys. Plush, felt, flannel, outing flannel, velvet, drill or crash could also be used. The doll could be made of different material below the arms.

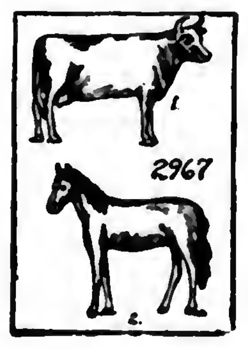
The pattern is cut in one size. Either style requires ¾ yard of 27-inch material. Pattern, 10 cents.

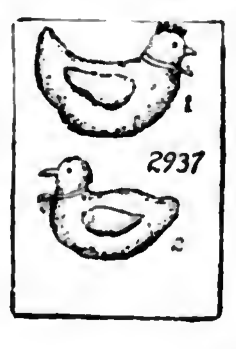




2298.—Rabbit, Monkey and Elephant.—The patterns are cut in one size only. It will require one yard of brown flannel for the monkey and ½ yard of red flannel for his suit. The elephant requires one yard. The rabbit, ½ yard. Pattern, 10 cents.

2300.—Dog, Pig and Sheep.—The patterns are cut in one size only. It will require ¼ yard of flannel for the sheep, ¾ yard for the dog, and ⅝ yard yard for the pig. Pattern, 10 cents.





2967.—Cow and Horse.—These toys will please the little tots. The pattern is cut in one size. The cow requires ⅝ yard of 27-inch material, and the horse, ⅞ yard of 36-inch material. Pattern, 10 cents.

2937.—Chick and Duckling.—The pattern is in one size. It will require ⅝ yard of 24-inch material for either toy. Pattern, 10 cents.

Pour cornstarch or tapioca pudding into fancy molds and watch the children's eyes at dessert time. It takes a minute or two longer but those minutes are well spent.

Why the Sewing Clubs always met at Aunt Mary's

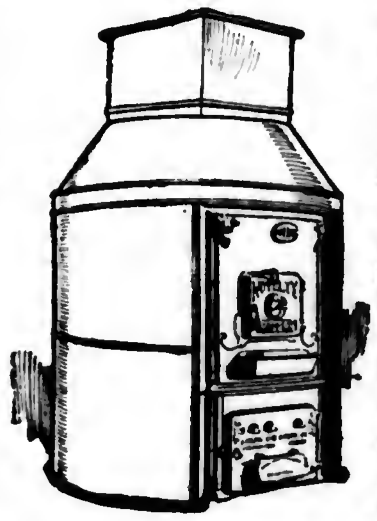
One register heats the house

"Even the extra wraps and overworked coal piles didn't bring comfort to many last winter.

"But when icy blasts sent the thermometer downward on Sewing Club days, we were sure to find comfort at Aunt Mary's. And no wonder. Aunt Mary installed a Novelty Pipeless.

NOVELTY PIPELESS HEATER

"The coldest days found every room in the house cozy and warm—filled with fresh, healthy and dustless heat."



There is no magic about the Novelty Pipeless. It is built just as sturdy as it is humanly possible to build it—from the best material obtainable and in a plant where for 73 years the manufacture of Heating and Cooking Apparatus has been under the direct supervision of Heating Engineers. That means correct heating principles, hence less fuel consumed—more heat produced.

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SILK TRIM Serge Dress $12.50

This beautiful dress is a prize fashion. It is made of fine winter weight half wool storm serge which will give an unlimited amount of satisfactory wear. Lapel and armholes are bound with silk. Sash and girdle belt are made of all silk messaline. The vestee is made of all silk tricolette. You can press these plaits. Misses sizes 14, 16, 18—ladies 32 to 44. Navy Blue only. Give size.

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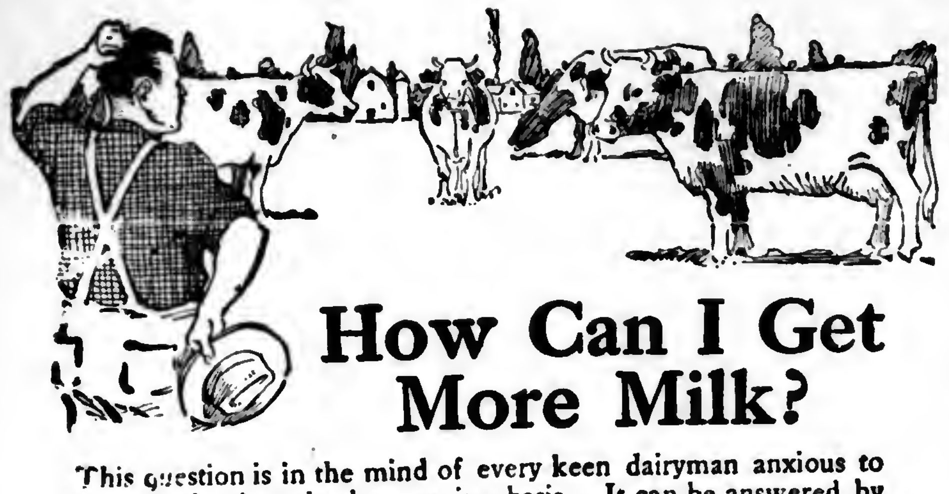

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International Special Dairy Feed is scientifically mixed. Its formula has been O.K.'d by experienced dairymen who proved that it made more milk. For many years thousands of dairymen have used it exclusively. Give it a fair test. Put one-third of your herd on a ration of International Special Dairy Feed for three months. Can be used as an entire grain ration or mixed with home-grown grains. Then compare the milk production with results secured from other feeds. You will secure more milk than from any other mixture of similar analysis. Order a ton of International Special Dairy Feed from your dealer and start making this test at once. It means more milk. And more milk means more money.

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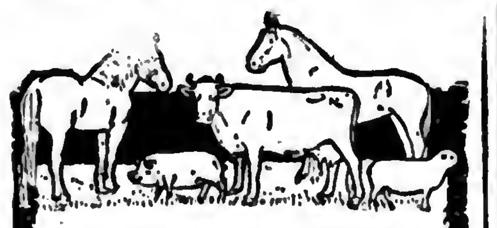

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—full of life and vigor. International Stock Food Tonic helps them to properly digest and assimilate their food. Keeps their blood pure—helps them to avoid disease. The feed saved more than pays for it.

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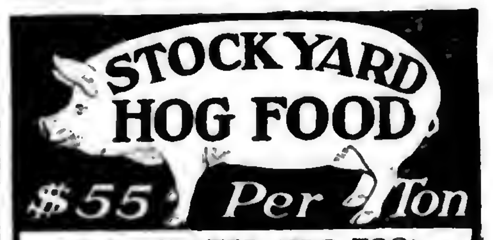
—include International Stock Food Tonic, Hog Tonic, Worm Powder, Animal Dip, Pheno (Disinfectant), Colic Medicine, Heave Powder, Distemper Powder, Gall Salve, Poultry Preparations, Silver Pine Healing Oil and many others.

Successful for 32 Years

A steadily increasing demand for over 32 years proves their popularity.

International Stock Food Company
Minneapolis, Minn. Toronto, Can.

ASK YOUR DEALER



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produce highest grade pork at lowest cost. Ask for samples and feeding directions.

CONSOLIDATED DIGESTER TANKAGE PROTEIN 40 to 45 per cent $80 PER TON
STOCK YARD HOG FOOD PROTEIN 25 to 30 per cent. $55 PER TON.

Less than ton lots cost more

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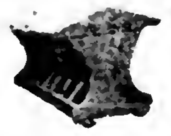

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Special Reduction For 30 Days—20 per cent Off on Reg. Big Type Spotted Poland China bred sows with litters by their sides. Spring gilts and boars, fine yearling boar. Fine lot of Fall pigs. 22 from two sows, prize-winners at the Ohio State Fair. Remember the [illegible] of that grand old champion, O. and K's Pride 30th, is in this herd. Send in your order at once and get the best for less than anywhere else, with this reduction off.
H. C. KYNER, Shippensburg, Pa. R No. 4.

20 REGISTERED Guernsey heifers from 9 to 18 mos. old, more than ordinarily well bred and individually good individuals. **Lowell Gable, Paoli, Pa.**

REG. DUROCS. Open gilts and boars ready for service. Selected individuals from Defender and Orion Cherry King breeding.
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$500 Cash Secures 150-Acre Farm With

2 cows, 5 tons hay, 6 cords firewood, [illegible] tools; 450 apple trees, 500 sugar maples, [illegible] worked fields, 15-cow spring-watered pasture, [illegible] cords wood and large [illegible] timber [illegible] house, [illegible] barn; owner unable care for [illegible] everything ready for winter [illegible] balance easy terms. Details this and [illegible] page 6 Strout's [illegible] Catalog Farm Bargains 23 States [illegible] free copy. STROUT FARM AGENCY, 1422 BE Land Title Bldg., Philadelphia.

COMFORT AND PLEASURE THIS WINTER

CLEARWATER ON CLEARWATER HARBOR AND GULF OF MEXICO. Wonderful surroundings, surf bathing, mild climate, comfortable accomodations, hotels and cottages. Citrus groves, truck farms, chickens and dairying. [illegible] sufficient rain insures [illegible] growth. [illegible] Clearwater, Fla.

Patent Tension SHEARS

Self-Sharpening. Made of good quality cutlery steel, 8 inches long with steel adjustable spring tension bolt, preventing the blades from spreading and giving a clean cut the full length. Nickle silver finish, highly polished.

Sent prepaid for two subscriptions for the balance of this year and all of next, or to Jan. 1, 1922, at 75 cents each. Given with a single subscription and 35 cents additional.

Pennsylvania Farmer
261 S. Third Street Phila, Pa. 8 Inches Long

Cutting The Pork Carcass

There are a number of methods of cutting a pork carcass. Many of these have been developed to meet local needs and in some cases a certain method is followed for want of a better one. In the packing house a general method is followed based upon the best utilization of the carcass. This same method can be followed on the farm with good results. It is a simple and convenient way of handling pork for use in the home.

If the carcass has been thoroughly cooled and the fat is firm it is much easier to handle the meat, make smooth and more uniform cuts than if the carcass is cut up while warm. If the carcass was split at the time of slaughtering each half can be handled as a separate unit. If the carcass has not been split this should be the first step. Try and divide the carcass as equally as possible by splitting thru the center of the back bone. Make a long cut from the tail to the neck along the back with a sharp knife. Split the back bone with a saw which will make a neater job than the use of a cleaver or an ax.

As soon as the carcass has been split, remove the head unless this was done at the time of slaughtering. The brains and eyes should be taken out of the head and the balance cleaned up, cutting away any hair or scurf that may remain. In splitting the head, care should be taken that the saw does not come in contact with the teeth as they will dull the cutting edge. The nostril cavity should be well cleaned before the head is used.

The head may be used for headcheese, sausage or scrapple. The place to remove the shoulder from the middle will depend upon the size of the shoulder desired. If a large shoulder is wanted it should be cut between the fourth and fifth ribs. If a small shoulder is desired the cut made be made between the first and second ribs. If the entire shoulder is cured the spare ribs are removed by cutting under the ribs with the knife following the bone closely. The square corners and scrag ends are then removed so as to make a neat looking shoulder. The shank is removed at the knee joint and then shoulder is ready for the curing vessel. If only a small amount of shoulder is required it is frequently prepared into what is known as the "California picnic" or "color shoulder." When trimmed in this manner the upper portion of the shoulder is removed as soon as the spare ribs have been removed and before the shoulder is trimmed. The upper part of the shoulder which has been removed is used for roasts, chops or sausage but the heavy layer of fat over the back should be removed and used for lards. The small shoulder can be trimmed the same as a regular shoulder. The middle is cut from the ham in front of the pelvic bone. If a large ham is desired the cut should be made well forward over the loin. If a small ham is desired the cut is made well back toward the pelvic bone. In making the cut in front of the ham, it should be made at the back bone, thus leaving the upper part of the ham on the bone.

The ham should be faced and neatly trimmed. By facing is meant the removal of the surplus fat on the inside of the ham. In trimming the ham as little as possible of the lean should be exposed. The entire ham with the exception of the face should be covered with a thin layer of fat, which is necessary to keep the lean meat from becoming hard while in the curing process or after it is cured. After trimming the ham, remove the shank at the hock joint and the ham is ready for the curing vessel. The trimmings are used for lard and sausage.

The middle is divided into two main portions, namely the loin from the heavy part of the side and the bacon piece from the lower part. The loin is cut from the bacon piece by cutting just below the tenderloin muscle on the rear of the loin and just below the heavy bundle of muscle over the rib on the front of the loin. In making this cut, hold the knife parallel to the lower side of the bacon strip. The fat back covering the top of the loin should be trimmed off and used for lard. It is not economical to use that portion for chops or roasts. After the fat has been removed from the loin use it for roasts and chops.

The ribs on the inside of the bacon strip should be removed by cutting closely to the ribs. Leave as much lean as possible on the bacon piece. These ribs are known as "spare ribs." The bacon piece should be flattened with a cleaver or flat instrument of some kind. Trim the edges of the bacon strip, removing all scrag ends. These can be used to better advantage as fresh meat for lard and sausage instead of passing it thru the curing vessel.

A carcass handled in this manner is cut up in an economical manner and the best possible use is made of all parts of the carcass.

Next week we hope to discuss the curing of meat and the making of sausage.

TUBERCULOSIS SYMPTOMS IN CATTLE NOT SPECIFIC

The symptoms of tuberculosis are not specific. Among them are the enlarged superficial imphatic glands, especially those about the head and above the udder. When the internal organs are badly involved, the animals become very thin. Occasionally there is tympanitis or bloating due to the pressure of the enlarged tuberculosis glands on the esophagus, which prevents the escape of gas from the rumen. Sometimes animals are lame because of tuberculosis joints and occasionally they refuse to breed because of tuberculosis of the ovaries or uterus. In rare instances, swellings occur which are due to infection of the skin.

If the disease is located in the lungs, there may be caughing, change in the respiration, and perhaps other symptoms referable to those organs. If the tubercles are located in the liver, the manifestations will be those of a disordered liver. If the lesions are in the brain, the symptoms will be disturbances in the function of the nervous system.

GROWTH OF GREAT SHOW

Our friends are probably aware that the 1920 International Live Stock Exposition will be held at the Union Stock Yards, Chicago, from November 27th to December 4th. For twenty years past this display of animal life has held first place among events of similar character. Each season has added to its scope, magnificence and educational influence. Essentially international in character it has attracted attendance from all the civilized countries of both northern and southern hemispheres, naturally adding to the prestige of the live stock industry of this country.

The 1920 Exposition will be staged on a broader scale than ever. A new feature is a comprehensive display of grains and roughage to which all the leading agricultural states will contribute.

All the breeds of draft horses, beef cattle, swine and sheep will be reppresented, the aggregate number of exhibits being the largest since the Exposition was inaugurated and the display of fat cattle, hogs and sheep in carloads will be the best ever presented from the standpoint of quality, if not numerically.

We believe every live stock producer will profit by attending this exposition, if only for a single day. The exhibits are highly educational and as we have gone into a period of high cost production, compared with pre-war conditions, the lessons it teaches and the fund of practical experience it places at your disposal should not be ignored and breeders desirous of keeping abreast of the times.

The International Live Stock Exposition is not merely a magnificent spectacle of domestic animal life, but a valuable exponent of one of the greatest and most essential American industries and those who fail to avail themselves of its educational value are missing opportunity.

PIGS ON RAPE PASTURE NEED SOME TANKAGE

Tests in hog feeding conducted by W. L. Robison, of the Ohio Experiment Station, during the past season show an advantage of feeding some tankage as a supplement to corn to pigs on rape pasture. Some farmers have believed that rape pasture alone is a satisfactory supplement for corn.

Pigs weighing 36 pounds and fed a ration of corn 19, tankage 1, parts by weight, for 18 weeks on rape pasture weighed 171 pounds at the end of the experiment.

A similar lot of pigs full fed on corn alone but on rape pasture for 18 weeks made a final weight of 146 pounds.

The average daily gain for the tankage fed group is 1.1 pounds and nine-tenths of a pound for the lot full fed on corn alone.

The tests show that rape is a valuable pasture for swine, but it will not fully supplement a full-fed ration of corn.

ABERDEEN-ANGUS ASSO. IMPORTING JUDGE

The American Aberdeen-Angus Breeders' Association is again importing a foreign judge to pass upon the breeding cattle at the coming International Live Stock Exposition to be held at Chicago, Nov. 26 to Dec. 4 next. Mr. John Philip, of Dandaleith, Craigellachie, Scotland, who last year judged the Aberdeen-Angus at Argentina's great show at Palermo, will do the work for the Yankee Doddie men at Chicago.

Off Summer Pastures

Your animals are coming off summer pastures and going on dry feed. It's a big change. Out in the succulent pastures, Nature supplies the tonics and laxatives to keep animals in condition.

—But unless you supply these tonics and laxatives to your stock on dry feed, you are not going to get full returns from your hay, grain and fodder. Besides, your animals are apt to get "off-feed" and out of fix.

Dr. Hess Stock Tonic

Supplies the Tonics—Laxatives—Diuretics

It keeps animals free from worms.
It keeps their bowels open and regular.
It keeps the appetite and digestion good.
It conditions cows for calving.
It helps to keep up the milk flow.
It keeps feeding cattle right up on their appetite.
It keeps hogs healthy, thrifty, free from worms.
It means health and thrift for all animals.

Always buy Dr. Hess Stock Tonic according to the size of your herd. Tell your dealer how many animals you have. He has a package to suit. Good results guaranteed.

Why Pay the Peddler Twice My Price?

25 lb. Pail, $2.50 **100 lb. Drum, $8.50**

Except in the far West, South and Canada. Smaller packages in proportion.

DR. HESS & CLARK **Ashland, Ohio**

Dr. Hess Poultry PAN-A-CE-A Will Start Your Pullets and Moulted Hens to Laying

Dr. Hess Instant Louse Killer Kills Lice

LET US TAN YOUR HIDE.

Horse or Cow hide, Calf or other skins with hair or fur on, and make them into coats (for men and women), robes, rugs or gloves when so ordered. **Your fur goods will cost you less than to buy them and be worth more.**

Our illustrated catalog gives a lot of information. It tells how to take off and care for hides; how and when we pay the freight both ways; about **our safe dyeing process** on cow and horse hide, calf and other skins; about the fur goods and game trophies we sell, taxidermy, etc.

Then we have recently got out another we call **our Fashion book,** wholly devoted to fashion plates of muffs, neckwear and other fine fur garments, with prices; also **fur garments remodeled and repaired.**

You can have either book by sending your correct address naming which, or both books if you need both. Address

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In France the World's greatest laboratory has discovered a germ that kills rats and mice by [illegible]. Absolutely safe. Cannot harm human beings, dogs, cats, birds, chickens or pets. [illegible] dwellings and outbuildings with no offensive after effects. It is called Danysz Virus.

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In many places a lantern or lamp is not convenient or safe, then you need a flashlight, always safe, always ready—when going **"down cellar"** or "up stairs" when harnessing the team in the dark—whenever you need instant portable light indoors or out you need the Dependable Electric **Flashlight.**

This Franco Electric Flashlight is 7 in. long, made of metal with Fibrocoid covering, plain but durable. Given as a reward for two subscriptions at 75 cents each or with a single subscription and 75 cents additional.

Pennsylvania Farmer
261 S. Third St. Phila., Pa.

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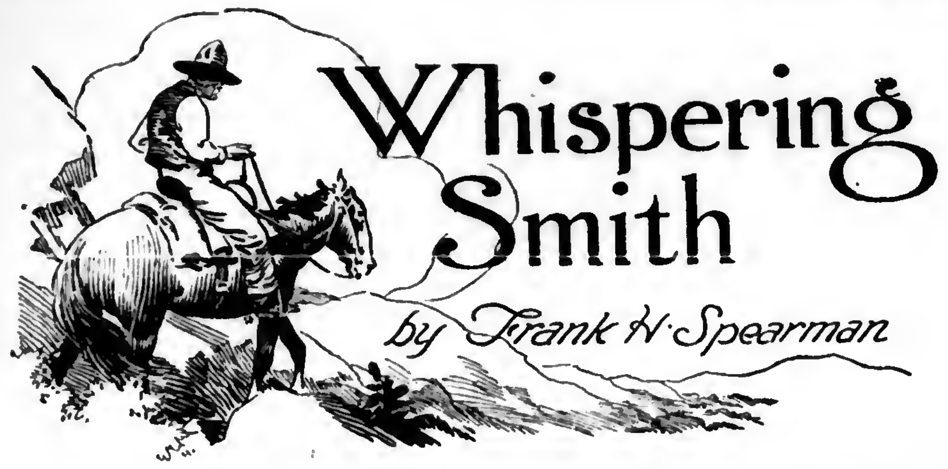


Whispering Smith

by Frank H. Spearman

(Continued from Last Week).

CHAPTER XLIV

(Continued from Last Week).

The bachelor president rolled his eyes as he reached for his cup. "Thank you, Mrs. McCloud, only one after that." He looked toward Marion. "All I can say is that if Mrs. McCloud's husband had married her two years earlier he might have been general manager by this time. Nothing could hold a man back, even a man of his modesty, whose wife can say as nice things as that. By the way, Mrs. Sinclair, does this man keep you supplied with transportation?"

"Oh, I have my annual, Mr. Bucks!" Marion opened her bag to find it.

Bucks held out his hand. "Let me see it a moment." He adjusted his eye-glasses, looked at the pass, and called for a pen; Bucks had never lost his gracious way of doing very little things. He laid the card on the table and wrote across the back of it over his name: "Good on all passenger trains." When he handed the card back to Marion he turned to Dicksie. "I understand you are laying out two or three towns on the ranch, Mrs. McCloud?"

"Two or three! Oh, no, only one as yet, Mr. Bucks! They are laying out, oh, such a pretty town! Cousin Lance is superintending the street work—and whom do you think I am going to name it after? You! I think 'Bucks' makes a dandy name for a town, don't you? And I am going to have one town named Dunning; there will be two stations on the ranch, you know, and I think, really, there ought to be three."

"As many as that?"

"I don't believe you can operate a line that long, Mr. Bucks, with stations fourteen miles apart." Bucks opened his eyes in benevolent surprise. Dicksie, unabashed, kept right on: "Well, do you know how traffic is increasing over there, with the trains running only two months now? Why, the settlers are fairly pouring into the country."

"Will you give me a corner lot if we put another station on the ranch?"

"I will give you two if you will give us excursions and run some of the Overland passenger trains thru the valley."

Bucks threw back his head and laughed in his tremendous way. "I dont' know about that; I daren't promise offhand, Mrs. McCloud. But if you can get Whispering Smith to come back you might lay the matter before him. He is to take charge of all the colonist business when he returns; he promised to do that before he went away for his vacation. Whispering Smith is really the man you will have to stand in with."

Whispering Smith, lying on his iron bed in the hospital, professed not to be able quite to understand why they had made such a fuss about it. He underwent the excitement of the appearance of Barnhardt and the first talk with McCloud and Dicksie with hardly a rise in his temperature, and, lying in the sunshine of the afternoon, he was waiting for Marion. When she opened the door his face was turned wistfully toward it. He held out his hands with the old smile. She ran half blinded across the room and dropped on her knee beside him.

"My dear Marion, why did they drag you away out here?"

"They did not drag me away out here. Did you expect me to sit with folded hands when I heard you were ill anywhere in the wide world?"

He looked hungrily at her. "I didn't suppose any one in the wide world would take it very seriously."

'Mr. McCloud is crushed this afternoon to think you have said you would not go back with him. You would not believe how he misses you."

"It has been pretty lonesome for the last year. I didn't think it could be so lonesome anywhere."

"Nor did I."

"Have you noticed it? I shouldn't think you could in the mountains. Was there much water last spring? Heavens, I'd like to see the Crawling Stone again!"

"Why don't you come back?"

He folded her hands in his own. "Marion, it is you. I've been afraid I couldn't stand it to be near you and not tell you—"

"What need you be afraid to tell me?"

"That I have loved you so long."

Her head sunk close to his. "Don't you know you have said it to me many times without words? I've only been waiting for a chance to tell you how happy it makes me to think it is true."

(The End.)

THE COMMONER

His name is seldom mentioned in the press,
No medals come to him to mark his fame;
He is not noticed as a world success,
Titles are never added to his name
Yet he is brave who keeps his post each day
And truly lives unto the faith he knows,
For oft his fondest plans must go astray,
And he is a victim to lifes' various woes.

The commoner must see his loved ones die,
Must suffer pain and heartache and despair;
Lacking the comforts wealth could buy,
He has to give his children double care;
His courage does not flash across men's view,
Yet it is there like gold in rock and stone;
It holds him to the tasks he has to do
And strengthens him to make his fight alone.

It calls for bravery to face the heat of day
And toil for love of those who wear your name;
To keep your post of duty, come what may,
And asks no favors from the hand of fame;
To play life's game and miss the thundering cheers,
To serve the world and seek no word of praise,
To give your best thruout your round of years
And walk erect, altho on rugged ways.

Few know the glory and the peace of life,
Nor are they braver than the patient throng
Who bear the burdens and the hurts of strife,
Content to live and love and plod along;
They miss the soft, sweet hours or careless ease,
Yet know the selfsame sorrows of the great;
They may not follow fancy as they please,
Yet they must bear the ironies of fate.

(Copyright, 1920, by Edgar A. Guest)

JUST SUPPOSE

If all that we say
In a single day,
With never a word left out,
Were printed each night
In clear black and white,
'Twould prove queer reading, no doubt.

And then just suppose
Ere one's eyes he could close,
He must read the day's record thru,
Then wouldn't one sigh,
And wouldn't he try
A great deal less talking to do?

And I more than half think
That many a kink
Would be smoother in life's tangled thread,
If one-half that we say
In a single day
Were left forever unsaid.

Author Unknown.

O Margarine! To thee
I hum this little verse,
As I hold my breath and take thee
For butter or for worse.

DADDY

Take my head on your shoulder, Daddy,
Turn your face to the West;
It is just the hour when the sky turns gold,
The hour that mother loves best.
The day has been long without you, Daddy,
You've been such a while away;
And now you're as tired of your work, Daddy,
As I am tired of my play.

But I've got you and you've got me,
So everything seems rights;
I wonder if mother is thinking of us,
Because it is my brithday night.

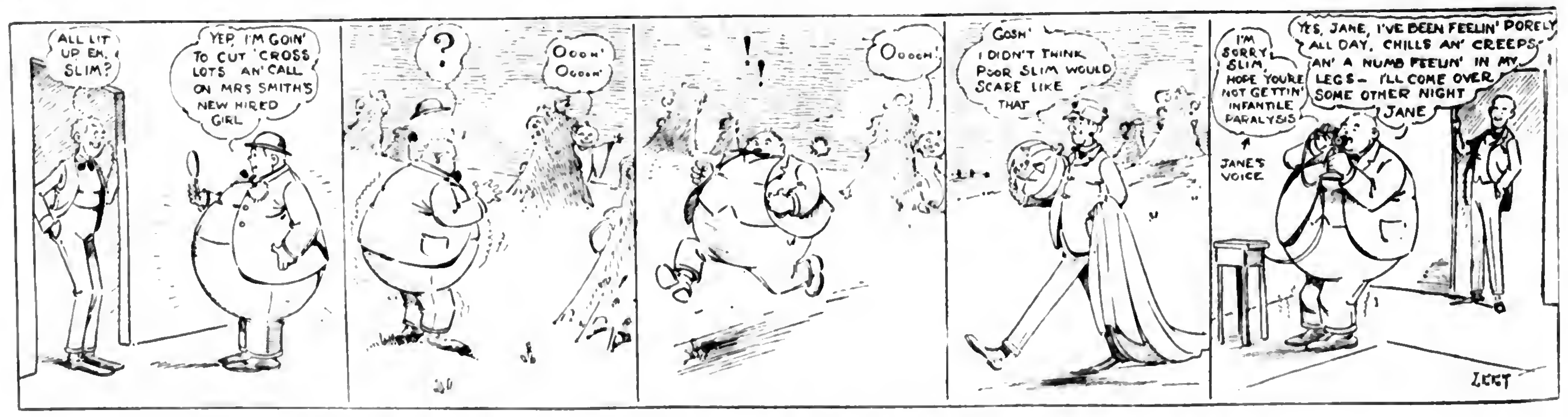
Why do your big tears fall, Daddy?
Mother's not far away;
I often seem to hear her voice
Falling across my play.

And it sometimes makes me cry, Daddy,
To think that it's none of it true;
Till I fall asleep to dream, Daddy,
Of home and mother and you.

For I've got you and you've got me,
So everything may go;
We're all the world to each other, Daddy,
For mother, dear mother, once told me so.

I'm sometimes afraid to think, Daddy,
When I am big like you,
And you are old and gray, Daddy,
What you and I would do,
If, when we got up to heaven,
And mother was waiting there,
She shouldn't remember the two she left
So sad and so lonely here.

But year by year still sees no change,
And so 'twill all be right;
We shall always meet her in our dreams,
Daddy, good night, Daddy, good night.


ALL LIT UP EH, SLIM?
YEP, I'M GOIN' TO CUT 'CROSS LOTS AN' CALL ON MRS SMITH'S NEW HIRED GIRL
?
Oooh' Ooooh'
!
Ooooh!
GOSH' I DIDN'T THINK POOR SLIM WOULD SCARE LIKE THAT
I'M SORRY SLIM, HOPE YOU'RE NOT GETTIN' INFANTILE PARALYSIS
JANE'S VOICE
YES, JANE, I'VE BEEN FEELIN' PORELY ALL DAY, CHILLS AN' CREEPS AN' A NUMB FEELIN' IN MY LEGS— I'LL COME OVER SOME OTHER NIGHT JANE
LEET

Al Acres Played a Near Hallowe'en Trick on Slim the Other Night, and Jane is Disappointed.

AUTUMN LEAVES

By Samuel J. Singer.

Autumn leaves,
Slowly passing,
Passing from their life away;
Autumn leaves,
Now are fading,
Fading with a slow decay,
They who long our homes have shaded,
And who oft our pleasures aided;
They now are passing from our view,
Leaving the scenes their childhood knew.

Autumn leaves,
Gently falling,
Falling to their mother earth;
Autumn leaves,
Soon they'll quicken
Quicken with a second birth.
Soon again they'll wave above us,
Soon again their shade will guard us,
From the day-god's fiery rays,
As thru the azure vault he strays.

Autumn leaves,
Silent warning,
Warning of our life's short day;
Autumn leaves,
Plainly tell us,
Tell us of our own decay.
Even like them our forms will perish,
And like them our bodies die;
But a glorious hope we cherish,
That we live again on high.

AN ANSWER TO "LITTLE BOY BLUE"

If Little Boy Blue had played out in the dirt,
With a top and a twisted string,
In cotton trousers and checkered shirt,
And swung in a grapevine swing;
Then the little toy dog, so bright and new,
And the soldier so "passing fair"
Would never have yearned for the "Little Boy Blue,"
Who "kissed them and put them there."

For a Little Boy Blue must get spattered with mud
And wade in the branch, or swim;
The splash in the water will quicken his blood,
And the dirt is a boon to him!
Oh, pent-up mem'ries and toys so new!
Oh, graves! and the dumb despair
Of the hearts that ache for a Little Boy Blue,
When we've kissed him and laid him there!

—Albert B. Paine.

OUR GIRLS

Pat-a-cake, pat-a-cake, baker's man;
Our girls make bread as fast as they can,
And when they serve it nice and hot
Oh, boy, I'll say it hits the spot!

Those whose care extends not far ahead will find their troubles near at hand.

Here's the Man —
and Here's His Work

October 9, 1920.
Milwaukee Air Power Pump Co.,
Milwaukee, Wisconsin.
Gentlemen:-
Answering your recent inquiry as to how my Milwaukee Air Power Pump System is performing, I want to say that is delivering the goods in great shape.
Since installing the System I find that it takes a great deal less time for me to perform the chores about the place and gives me more time for more important work.
Furthermore, our home is a place well worth living in with the conveniences which the Milwaukee System brings.
I can't see any other System except the one which delivers water direct from the well.
Yours truly,
C. F. W. Wendt.
Box 206 Crystal Lake Ill.

—a Water System That PAYS

By increasing milk production with a liberal supply of pure, fresh drinking water for the cows; by lightening the chores and giving more time for more important work; by supplying water for irrigation of gardens and orchards; by bettering the health of stock and poultry; and by increasing farm valuations—Milwaukee Air Power Systems *pay*.

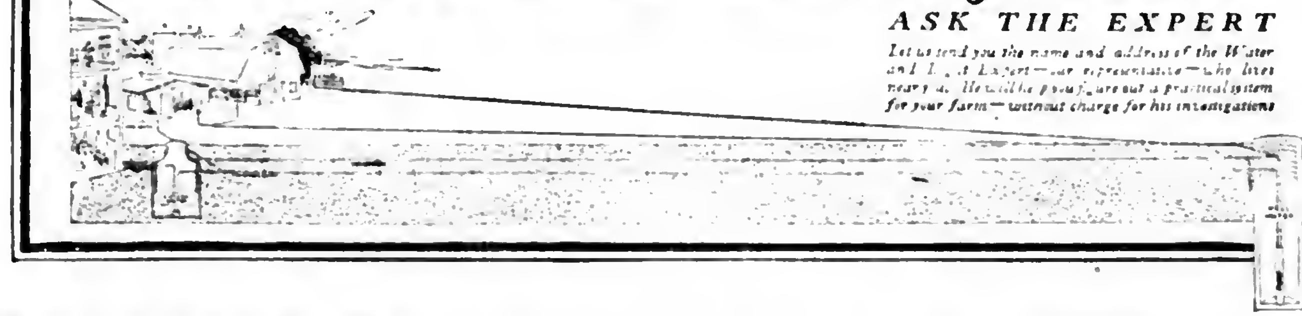
Milwaukee Systems—logical, simple, economical—store no water, but deliver it always fresh from the well.

Write for our literature

MILWAUKEE AIR POWER PUMP CO.
869 Third St., Milwaukee, Wisconsin

Milwaukee
Air Power WATER LIGHT Systems

ASK THE EXPERT



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Markets

PHILADELPHIA PRODUCE

—November 8, 1920.

The market on potatoes is ruling firm and active with prices a trifle firmer, there being here this morning some 100 to 110 cars of potatoes, most of which were from Penna. and N. J. points. The best potatoes are coming from the Macungie, Pa., section and these are selling around $2.25@2.50 cwt. Chester and Lancaster county potatoes sell mostly at $2.00@2.20 cwt., and other Penna. potatoes at $1.85@2 cwt. Some N. J. Giants sold here this morning at $3 150-lb. sack. The Hoosiers are selling at mostly 60@65c ⅝-bskt. with others at 70@80c bskt. N. J. sweet potatoes are quite firm and selling generally at $1@1.15 ⅝ bskt. There were seven cars of Eastern Shore sweet potatoes here and these sold at $3.25 bbl.

Vegetables—As the season on nearby grown beans is now practically over supplies are coming more freely from the southern points. Bunched beets remain at 2@4c bch. Brussel sprouts are selling at 18@20c with poor at 12@15c qt. Carrots firm at 50@75c ⅝-bskt. Cabbage is firmer, domestic selling at $15@18 ton and Danish at $20@25 ton. Nearby cabbage in ⅝-bskts. selling at 30@50c bskt. Cauliflower, Long Island selling at $2.75@3 crate. Celery has been much more plentiful since our last week's report and prices are much lower. N. Y. state selling at $3@3.50 crate. Penna. celery at 8@15c bch. Eggplants selling at $4 crate. Horse radish, 16@20c lb. N. J. lettuce selling $1@[illegible] box as to quality. Lima beans, $3.50@4.50 hamper. Onions show little change, bringing $1.50@1.75 100-lb. sack. Mushrooms are more plentiful at $1@1.75 3-lb. bskt. Parsnips, 60@75c ⅝-bskt. Parsley, large bch. at 2@2½c bch. Peppers, 20@50c ⅝ bskt. Pumpkins at $1.50@2 bbl. Radishes, 1@2c bch. Turnips are in good demand at 40@65c ⅝-bskt. while yellows range from 60c@$1. Canadian Rutabagas, $1.25@1.50 cwt. Spinach, 25@50c ⅝-bskt. Watercress at 2½c bunch.

Fresh Fruits—Apples continue very plentiful and prices show no material change. There were 20 to 25 cars of barreled apples here this morning. The following prices on the various varieties. Baldwins, $3.50@4.50 bbl.; Ben Davis, $3@3.50; Ganos, $3.50@5; Kings, $3.25@5.50; Gillflower, $4.50@5.50; Hubbardsons, $3@4.50; 20-Ounce Pippins, $3@3.25; York Imperials, $3.50@4; Staymans, $4.50@5.50; Grimes Golden, $4@6; Spys, $3.50@5.50; Greenings, $3.50@4.50; Delicious, $5@7; other odd varieties, $3@5.50. There were 21 cars of bulk apples here this morning selling mostly at $1.25@1.40 cwt. Grapes were a little lower at $1.37½@1.50 Jumbo bskt., with the 8-qt. bskt. at 30@32c. Bushel bskts. selling at $3.25@3.50 bu. N. J. cranberries, $3.50 crate. Pears, Bartletts, $2@3 bu.; Seckels $2.25@3.50 bu., and $7@10.50 bbl.; Sheldons, $1.50@3 bu. and $6@9 bbl. Anjous, $1.25@2.25 bu., and $4.50@6 bbl.; Keiffers, 30c@$1 bu. and 25@65c ⅝ bskt. Chestnuts are selling at 25@30c lb.

Poultry—Under the low prices prevailing the supplies seemed to have been cut down, with advance in prices, shipments increased with the result at this writing the market price is as follows: Heavy fowls, 37@38c; mediums, 30@40c, and Leghorns, 33@35c. Spring chickens, 34@35c. Leghorn spring chickens, 32@34c. Ducks, 30@34c; turkeys, 40@45c; geese, 25@30c.

Eggs—The supplies of strictly fine fresh eggs are not equal to demand and prices are advancing 2@3c per doz. At this writing Penna. and other nearby current receipts are selling at 76c per doz., firsts at 78@80c doz. and fancy candled and selected at 89@90c doz. Western firsts are selling at 73@76c per doz. and extra firsts at 78@80c doz.

YORK PRODUCE

—November 6, 1920.

The supply of late fall products has been large this week. Tomatoes, spinach, peppers, celery and low grade fruit was offered in abundance. The prices, accordingly were low and sales dull.

Eggs—80@85c per dozen.

Butter—Country, 65@70c lb.; separator, 70@75c lb.; milk, 14c qut.

Poultry—Hens, 20@30c lb.; dressed, $1@2.25 ea.

Vegetables—Potatoes, 10@25c ½-pk., 75c@$1.25 bu.; cabbage, 3@8c hd.; lettuce, 5@10c hd.; beets, 5c box; onions, 5c bch., 15@20c ½ pk.; corn, 20@35c doz.; peppers, 15@20c doz.; lima beans, 40c qt.; soup beans, 25c qt.; squash, 3@5c; spinach, 30c ½-pk.; turnips, 20@25c ½ pk.; ham, whole, 40@45c lb.; sliced, 45@55c lb.; lard, 25@27c lb.

Fruit—Apples, 10@40c ½ pk.; over supply of low grade apples on the market; 50c@$2 bu.; pears, 15@35c ½ pk.; tomatoes, 3@8c ea.; 10@20c ¼-pk.

Retail Grain Market—Wheat, $2.50; corn, $1.75; oats, $1; rye, $1.75; bran, $2.40 cwt.; middlings, $2.75 cwt.

Wholesale Grain Market—Wheat, $1.90; oats, 75c; corn, $1; rye, $1.40; bran, $45 per ton; middlings $55 per ton.

NEW YORK PRODUCE

Butter—Steady. Receipts, 7659 tubs. Creamery higher than extras, 61½@62c; extra (92 score), 61c; firsts (88 to 91 score), 48@62½c; packing stock current make, No. 1, 35c.

Eggs—Strong. Receipts, 14,511 cases. Fresh gathered, extra firsts, 76@78c; do firsts, 70@75c; state, Penna. and nearby western henery white, firsts to extras, 85@90c; do brown, extras, 82@85c; do gathered, brown and mixed colors, firsts to extras, 70@85c.

Cheese—Steady. Receipts, 2752 boxes. State whole-milk flats held specials, 26½@28c; do average run, 24@25c; state, whole milk flats current make, specials, 24@25c; do average run, 22½@23c; state, whole milk twins held specials, 26½@27½c; do, average run, 24½@25c.

Poultry—Live not quoted. Dressed steady. Fowls, 24@38c; others unchanged.

Fresh Fruits—Apples bskts., fancy $1.25@1.50; average, 65c@$1; barrels, York Imp., $4@5, Baldwin, $3@4.75; N. Spy, $3@4.50; 20-Ounce, $2.50@5; Wealthy, $4@7; Greening, $1.50@5; Snow, $6@8; McIntosh, $4.50@8.50; King, $3@5.50; pears, bskts., Bartlett, $2.75; Seckel, $1.25@2.75; Kieffer 50c@$1; bbls., Kieffer, fancy, $4.50@4; do poor, $2.50@3; Seckel, $6@9. Cranberries bbl., $8@10; grapes, state, Cat'ba, $1.25@1.35; Niagara, $1.25@1.35; Cond. bskt., $1.00@1.75; return, crate, $4.25@4.50. Casaba melons, Cal., crate, $2@3; Santa Claus melons, Cal., crate, $2.50.

BALTIMORE PRODUCE

—November 6, 1920.

Vegetables—Potatoes white, Md., Penna and nearby, per 100 lbs., $1.50@2; do, Jy., 150-lb. sack, $2.75@3; do Eastern Shore, McCormick, 100 lbs. $1.50. Sweets, yellow, No. 1 new bbl. $3.50@4.

Butter—Creamery, Western separator, extras, 62@63c; firsts, 60@61c; do prints, ½ lb. extras, 63@64c; firsts, 61@62; do 1 lb., extras, 63@64c; firsts, 61@62c; nearby creamery extras, 50@52c; firsts, 48@49c; dairy prints, Md., Penna. and Va., extras, 50@52c; firsts, 48@49c; storepacked, firsts, 28c.

Eggs—Western Md., Penna. and nearby, firsts, 72c; Eastern Shore, Md. and Virginia, firsts, 72c; Western (Ohio), firsts, 72c; W. Va., firsts 70c; Southern (N. Carolina), firsts, 68c.

Live Poultry—Chickens, young, large, lb., 35@36c; do small poor, lb., 37@36c; do old roosters, lb., 20c; do old hens over 4 lbs., lb., 36@37c; do small, lb., 32@33c; do white Leghorn hens, lb., 33@34c; do young white Leghorns 1½ lbs., lb., 33@34c. Ducks, Muscovy and Mongrel, young lb., 28c; do white Pekins, young, lb., 30c; Puddle, 4 lbs. and over, lb., 28c; do smaller poor, lb., 25@26c. Turkeys, choice heavy lb., 43@44c. Pigeons, old pair, 35@40c; do young pair, 35@40c. Guinea fowl, young 1½ lbs. each, 60c; do small, 1@1¼ lbs. each, 50c.

PITTSBURGH PRODUCE

—November 6, 1920.

Butter and Cheese—Prints, 69@69½c; tubs, 68½@69c cooking, 53@54c; Ohio, 64½@65½c; cheese, N. Y. full cream, 31@32c; Roquefort, $1@1.20; Wis. Swiss, 49@50c; do 7-lb. brick, 31@32c; Swiss, 5-lb. block, 32@34c; Phila. cream, doz. $1. Longhorns 31@32c, Limburger, 1-lb. 33c; do 2-lb. 32c.

Eggs—Fresh select, 75@77c; current receipts, 69@70c; candled storage, 57@58c.

Poultry—Dressed, hens, lb. 42@45c; roosters, lb., 28@30c; springers, lb. 40@45c; ducks, spring, lb. 50c; turkeys, lb., 70@75c.

Vegetables—Potatoes, Mich. sack, $3.65@3.75; sweet potatoes, E. Shore, bbl., $4@4.25; beans, wax and green, h. g. bu. $1.50@2.50; onions, Spanish, crate, $1.75@2; cabbage, h. g. bu., 80@90c; cauliflower, L. I., crate, $2.25@2.50, lettuce, home grown, bskt., 25@30c; turnips, bu. $1.50@2; garlic, lb. 25@30c; parsley, doz. 35@40c; radishes, doz., 25@50c; mushrooms, bskt., $1.50@2; carrots, bu., $1.25@1.50; celery, bch., 25@50c, peppers, hamper, $1@1.20; parsnips, bu., $1.25@1.50.

Fruits—Lemons, Cal. box, $2.50@4; oranges, Cal., Valencia, $10.50@12; apples, bu. $1@1.75; do bbl. $3.50@5; pears, Oregon, box, $5@5.50; grapefruit, crate, $4.75@5.50, dates, box, $6.50. grapes, Malaga, crt. $3.50@4.25; do Concord, 20-lb. bskt., $1.50@1.75. Honeydew melons, box, $1.50@2; Cassaba melons, box, $1.50@2; walnuts, black lb. $4@4½c; do English, lb. 25@28c; Filberts, lb. 20@25c; mixed nuts box, $5@5.25.

LIVESTOCK MARKETS

NEW YORK

—November 6, 1920.

Cattle—Receipts, 555; no trading. Calves, receipts, 340; easy; veals $15@20; culls, $12@14; grassers, $7@10; westerns, $10@13.50.

Sheep and Lambs—Receipts 2860; easier; sheep (ewes), $3.50@7; culls, $2@3; yearlings, $7@8; lambs, $10@13.75; culls, $7@9.

Hogs—Receipts, 3280; steady at $15.25; pigs, $14.75; roughs, $12.50.

EAST BUFFALO, N. Y.

Cattle—Receipts, 575, slow. Steady. Calves—receipts, 100; $1 higher, $6@20.

Hogs—Receipts, 1800; 50c and 65c higher; heavy mixed yorkers, light yorkers and pigs, $16; roughs, $13.50@14, stags, $9@11.

Sheep and Lambs—Receipts, 3600, steady, lambs, $8@13.75; yearlings, $7@10; wethers, $7@7.50, ewes, $3@7; mixed sheep, $6.50@7.

CHICAGO

Cattle—Receipts, 2000; compared with a week ago, native steers unevenly 25c to 75c lower, she stock steady to 50c lower, bologna bulls, 25c to 50c higher, veal calves, $1 higher, stockers and feeders and range cattle mostly steady.

Hogs—Receipts, 7000; steady to 15c lower than yesterday's average; closing easy, small lot $14.50, out of line, one load, $14.40; bulk of sales, $13.50@14.25; pigs steady to 15c lower; bulk desirable 100 to 130-lb. pigs, $14.50.

Sheep—Receipts, 2000; compared with a week ago, fat lambs, $1 to $1.50 lower; fat sheep and yearlings, 50c to 75c lower; feeding sheep and lambs, 75c to $1 lower.

PITTSBURGH

Hogs—Receipts, [illegible]; lower; heavies, heavy and light yorkers and pigs, $15@[illegible].

Sheep and Lambs—Receipts, [illegible]; steady; top sheep, $8; top lambs, lower, $13.50.

Calves—Receipts, [illegible]; steady; top, $18.

PHILADELPHIA LIVESTOCK

—November 6, 1920.

Receipts for week ending Nov. 6:

	Beef Cattle	Sheep & lambs	Hogs	Calves
Totals for week	2893	11255	7708	1162
Previous week	2537	5935	8577	1751

Beef Cattle—There was a fair inquiry for desirable grades of steers and cows and values were steadily maintained. Veal was firm and higher under light supplies and a fairly active demand. Quotations: Steers good to choice, $14@16; fair to good, $12@14; common to fair, $10@12; cows western, good to choice, 8½@9½c; do fair to good, 7@8½c; bulls, 6@8½c; calves, extra to choice, $19@19.50; fair to good, $16@18; common, $11@13; Tennessee, $16@17; other southerns, $6@10.

Sheep and Lambs—The market for sheep ruled steady under moderate supplies and a fair demand. Lamb was dull and lower, due to a light demand and more liberal supplies. Quotations: Sheared sheep, wethers, extra, $7.50@8; do good to choice, $6.50@7; medium, $5@6; do common, $2@3; ewes, heavy fat, $5.50@6; lambs, spring choice, West Va., $13.75@14.25; choice, Penna., $13@13.50; medium, $11@12; common, $9@10.

Hogs—Demand was fair and the market ruled firm and slightly higher under light offerings and stronger outside advices. We quote: Best western, $17@17.50; nearby, $14.25@14.50.

City Dressed Stock—There was a fair demand for steers, heifers and cows and values were steadily maintained. Lamb was dull and lower. Veal ruled firm under light offerings and a fair demand and prices were slightly higher. Hogs were firm and higher. We quote: Steers, 20@26c; heifers, 10@20c; cows, 10@16c; calves, city dressed, choice, 28@30c; calves, country dressed, 26@28c; lambs, spring, choice, 26@28c; sheep, 10@18c; hogs, 23½c.

NEW YORK HAY AND GRAIN

—November 6, 1920.

Feed.—The market for mill feed showed a steadier tone, altho the volume of business was small. Mills were not pressing sales and the comparatively small output is one of the principal supporting factors in the market, while Canada has withdrawn some of her offers of bran in the American markets.

Quotations: City feed bran, $42; middlings $43, in 100-lb. sacks; red dog, $70, nominal, in 100-pound sacks; Western spring bran, $42; standard middling, $41; flour middling, $53; red dog, $66 all in 100 pound sacks, 30-day shipment. Oat feed, $22; rye middlings, $30; white hominy feed, $45, all in 100-lb. sacks. Cottonseed oil meal, $51.50; linseed oil meal, $51, in 100-lb sacks.

Hay and Straw—The market is very slow and barely sustained. Large baled Timothy hay is scarce and holding up well, but the small bales are in some accumulation, selling extermely slowly and some shading is reported. Rye straw lower. Oat straw steady and averaging higher.

Hay—Large bales timothy, No. 1, $42. No. 2, $40@41; No. 3, $37@38; clover mixed, fancy, $40@41; No. 1, $38@39; No. 2, $34@36; small bales, clover mixed, fancy, $39; No. 1, $35@37; No. 2, $32@33; straw, large bales, No. 1 rye, $25; No. 1 oat, $16@17.

Wheat—No. 2 red c. i. f. $2.21¼; No. 2 hard winter, $2.24½; No. 2 mixed durum, $2.22½. Corn, No. 2 yellow, $1.12¾; No. 2 mixed, $1.11¼; No. 2 white, $1.13¾. Oats, No. 1 white, 67½c; No. 2 white, 67@67½c; No. 3 white, $66@66½c; No. 4 white, 65@65½c; ordinary white, clipped, 67c; fancy white, clipped, 72c. Rye—c. i. f. $1.84. Barley, c. i. f. malting, $1.13@1.15; feeding $1.03@1.04.

PHILADELPHIA HAY AND GRAIN

—Novmeber 6, 1920.

Baled Hay and Straw—Receipts, 100 tons of hay and 1 car of straw. Quiet but steady. We quote: Timothy hay, No. 1, none here; No. 2 $30@31; No. 3, $27@28; sample, $22@24; no grade, $18@20; clover mixed hay light mixed, $29.50@30; No. 1 mixed, $27@28; straw, No. 1 straight rye, $21@21.50. No. 2 do, $19.50@20; No. 1 tangled rye, $17.50@18.50; No. 2 do, $17@17.50; No. 1 wheat straw, $17@17.50; No. 2 do, $16@16.50.

Bran—Offerings light and market firmer. We quote car lots including sacks: Soft winter bran, western, in 100-lb. sacks, per ton, $43@44; spring bran, in 100-lb. sacks, per ton, $42.50@43.

Wheat—No. 2 red winter, $2.13@2.18, No. 2 red winter garlicky, $1.99@2.04.

Corn—Quote at $1.13@1.14, the latter for No. 1 yellow. Oats, carlots, No. 2 white, 67@67½c; No. 3 white, 66@66½c.

PITTSBURGH HAY AND GRAIN

—November 6, 1920.

Hay receipts altho about normal, do not seem to be able to meet requirements. There is no difficulty in placing all arrivals now at top figures. While clover and clover mixed hay have the preference, nevertheless good timothy hay readily sells at market values. We look for a steady market for the time being. Straw receipts liberal and equal to the demand. Oats, ear corn and shelled corn can be disposed of on arrival. The following prices prevail: No. 1 timothy $33.50@34; standard timothy, $31.50@32.50; No. 2 timothy, $29.50@30.50; No. 3 timothy, $26@27; No. 1 light clover mixed, $30@31; No. 1 clover mixed, $32@33; No. 1 oat straw $17@17.50; No. 2 oat straw, $16.50@17; No. 1 wheat straw, $16.50@17; No. 2 wheat straw, $16@16.50; No. 1 rye straw, $17@17.50; No. 2 rye straw, $16.50@17; No. 2 white oats, [illegible]; No. 2 yellow ear corn, $1.10@1.15; No. 2 yellow shelled corn [illegible].

PHILADELPHIA DAIRY MARKET

—November 6, 1920.

Butter—Receipts, 1212 tubs. Wholesale trade slow, as usual on Saturday, but supplies of high-grade goods small and market very firm, with jobbing sales occasionally made at a premium over quoted rates. Solid-packed creamery, fancy, high-scoring goods, 65@67c, the latter for jobbing sales; extra, 64c; extra firsts, 59@61c; firsts, 47@53c; seconds, 41@44c; sweet creamery, choice to fancy, 66@68c; fair to good, 55@65c; ladle-packed, as to quality, 35@37c; packing stock, 30@33c; fancy brands of nearby prints were jobbing at 72@75c; good to choice, 64@71c; fair to good, 61@63c.

Eggs—Receipts, 2769 cases. Strictly fine fresh eggs were scarce and firm at the late advance, with demand readily absorbing the offerings. Unattractive stock, however, was quiet and irregular in value. We quote the following: Nearby firsts, 75@77c doz.; nearby, current receipts, 74c doz.; nearby, ordinary to fair, 64@69c; western extra firsts, 75@77c; firsts, 70@74c; inferior lots lower; jobbing sales of fancy candled fresh eggs, 86@87c; fair to choice, 78@85c.

Cheese—Firmly held but quiet. We quote: New York, whole milk, held, fancy, flats, 27½@28c; do, fair to good, 25@27c; current make, fancy, flats, 25½@26c; do, common to fair, 22@25c; Longhorns, 26½@27½c; single Daisies, 26@26¾c; jobbing sales of fancy held goods, 30@31c.

NEW YORK MILK MARKET

—November 8, 1920.

Business was quiet in all parts of the city last week and with the wholesale demand virtually nominal, surplus was heavy. About all of the distributers are manufacturing. The November rate in 200-mile zone is $3.65 per 100 lbs. for 3 per cent milk, 3.6 per cent milk is $3.89 and 4 per cent milk $4.05.

Receipts of milk and cream in 40-qt. cans for the week ending November 6, 1920, were as follows:

Railroad.	Milk.	Cream
Erie	40,221	2,229
Susquehanna	12,903	119
West Shore	14,522	1,816
Lackawanna	58,110	2,378
New York Central (long haul)	186,717	2,995
Ontario	47,215	1863
Lehigh Valley	52,768	893
New Haven	6,900	85
Pennsylvania	12,942	510
Other sources	6,000	250
Totals	438,298	13,138
Same week last year	372,756	1,348

TOBACCO MARKET

—November 8, 1920.

Apparently sharing the stalemate incident to Presidential election, there was little activity in the tobacco market during the week. This time last year the large percentage of the crop was under contract, but the year before very little had been sold at this time. Now that election is over those holding their breath should breathe freely and be in better mood for business. Another feature of the situation has been the failure to reach a general agreement as to prices. If buyers could establish the price there would be more activity along this line, but it is evident daily that hereafter sellers will have a hand in determining this important feature.

Doubtless the market situation in the future will become tense and behooves all producers to unite firmly for a fair price. Buyers, of course, will claim the necessity of a lower scale of prices to correspond with existing reductions in many other lines, but it should be remembered, however, that most of these recessions are from undue fluctuation only and that such a situation has never existed in most of the tobacco growing sections. Therefore any effort on the part of buyers to lower prices of Pennsylvania tobacco will be resented as unfair and the same will be resisted by all men including prominently the local growers' organization which at this time is much stronger and in better position to express the sentiment of its members than at any time heretofore.

NEW YORK COTTON MARKET

—November 6, 1920.

The cotton market showed renewed weakness and a further severe decline today, with January contracts selling off to 18.60c, or 85 points net lower and more than 3½ cents per pound below the high point reached on the end-October recovery. That delivery closed at 18.65c, with the general list closing steady at a decline of 35 to 72 points.

The factors chiefly responsible for the continuation of the sellnig movement were considered practically the same as those mentioned during yesterday's late trading. These included reports of increased spot offerings in the South, more active hedge selling, continued depression in the goods trade, and apprehensions that the weakness of foreign exchange would further curtail demand for export. The sharp break in grain may also have contributed to the weakness, as some of the local cotton traders took it as indicating that holding movements could not be expected to fully sustain prices.

INTERSTATE MILK PRICES

—November 6, 1920.

Prices for milk delivered to Philadelphia by the farmer in effect for October are as follows: Three per cent milk, $4.20 per cwt. or basic quantity price per quart of 9.1c; 3.5 per cent milk, $4.40 per cwt. or basic quantity price 9.6c per quart; for four per cent milk, $4.60 per cwt., basic quantity price of 10c per qt. The price for surplus milk 3 per cent, $2.41 cwt.; 3.5 per cent, $2.61 cwt.; 4.0 per cent, $2.81 cwt. at [illegible] stations. When milk is not tested [illegible] Philadelphia is [illegible] 10c per quart.

Farm Products Prices and Prospects

REVIEW OF THE FEED MARKET

By Sanders Sosland

Feed markets are entering a season in which new factors must be considered in price fluctuations. The pasture season is approaching its end, being succeeded by weather which stimulates feed consumption. This fact alone is enough to impart some bullishness over the outlook for prices of feedstuffs. There are other influences which tend to make one friendly to the bullish side of the market. Almost invariably, except under very abnormal conditions, the trend of feed prices is upward in the late fall, winter and spring months. However, the trade should not overlook the bearish perspective created by a study of the general economic situation. Market observers would be generally bullish except for the effect of the clouded commercial outlook upon the trade in feedstuffs.

Reduced Demand

Prospective buyers and other feed interests are quite well versed on the supply situation, at least in a broad way. Their attention just at the moment is being directed to a survey of the outlook for demand. In this connection, much importance must be attached to the depression thru which the dairy industry of the East and some northern and central states sections of the country are passing. The reduced outlet for the products of the dairy cow and the lessened prosperity of the dairymen naturally act as an important check on the sales of feeds to this class of consumers. They cannot pay as high prices as in the past few years, and they can be expected to economize to a very great extent in the purchase of feeds. Another influnce along the lines of general business depression which is being felt in the feed trade is the serious lack of credit available for making purchases. This difficulty, while prevailing in a measure over the entire country, is affecting most the buying power of the south, or the cotton belt. At the present time, for instance, handlers of feed who normally look to the south as the outlook for the bulk of their offerings say that the acute credit strain in that section is the pivotal factor in the feed price depression of recent months. Incidentally, there have been numerous cases recently where buyers have been unable to take up drafts on shipments which they ordered, owing to inability to obtain the funds. The lack of credit is also checking demand among the feeders in portions of the North and East, but in this respect the consuming trade there is in a far better position than the cotton belt.

Supplies Large

The abundance of corn, oats and other coarse grains, including kafir and milo, and the enormous stocks of hay and roughage also will tend to check the volume of buying of feedstuffs on market. The excellent condition of pastures in practically every section of the country and their use for a longer period than usual have permitted the accumulation of an abnormally large surplus of feed, and markets have yet to feel the effect of this feed both in respect to the probable surplus available for markets and as a check on the buying power of the trade during the important feeding seasons. The changed position of cattle and hog prices also are influences which demand more than passing consideration, being bearish, of course.

Bran and Shorts

Bran and shorts, after receding to a new low level for the crop year or for the past two crop years, rallied moderately in price, with the character of the market now strengthening the belief that values will remain on a firm basis for the present. Mills in both the spring and winter wheat sections of the United States are restricted in their production of brain and shorts by an extremely light demand for flour. Plants are being operated at less than half normal capacity, and any slight improvement in the demand for the mill offals is quickly felt. There are no stocks of any consequences in the country, the jobbers and other handlers who normally accumulate large holdings during the late summer and early fall having refrained from entering the market. And the trade already is feeling the absence of such feed, which generally begins leaving warehouses about this time.

Sales of bran for prompt shipment are being made on the principal markets of the West between $29 and $31 a ton, with quotations for December shipment on practically the same basis. Early in October sales were made as low as $25 a ton, but the market rallied quickly from this basis. The heavier offal is in a more uncertain position than bran, with quotations as high as $40 a ton at Minneapolis and around $37 a ton in ansas iCty, both markets, however, quoting the brown shorts or standard middlings between $20 and $32 a ton. St. Louis and Chicago also quote gray shorts around $39 to $40 a ton. I am rather favorable to the purchase of bran for winter needs, this view being based largely on the probability that mills will not increase their production sufficiently to meet the greater requirements of the consuming trade. The broadend demand may not be as easily apparent as in previous years during the late fall and winter, but, in view of the slackened mill activity, no important enlargement of sales is needed to maintain values on a firm basis. Shorts, on the other hand, may feel sympathetically the depression of hogs and the substitution of corn, of which there is an enormous crop. There is talk of $35 bran before the close of the calendar year, that is, in the milling centers of the West, but shorts at that time should command a premium of hardly more than $5.

Cottonseed Feeds

Cottonseed cake and meal have moved in a course somewhat similar to that of bran and shorts; in fact, the trend of most feed prices has been along the same lines, receding to new low levels in the forepart of the month only to be followed by moderate rallies. Some significance is attached to this, many considering the rebound in prices as a sign that the low level or turning point has been reached. Cottonseed cake and meal sold down to $35 a ton for prime 43 per cent protein offerings, basis Texas, for November-December-January shipment, but at the present writing the market is in a rather firm position around $38 a ton. In the important feeding sections of the Middle West values are holding between $45 and $50 a ton delivered. Cake and meal of a somewhat lower protein content is quoted around $38 a ton in Georgia and surrounding points in the Southeast.

Feeding demand for cottonseed feed has broadened to an extent, but the total sales being made to the consuming trade generally are still of a disappointing volume. Fertilizer and mixed feed manufacturers are buying very sparingly, the latter, of course, being restricted, by dullness in demand for their own products. Exporters are bidding for cake and meal, though not actively, and they are refusing to pay prices sought by crushers. The unwillingness of planters to dispose of seed at current quotations and their claims that they will use the product for fertilizer rather than sell has had a bullish effect upon the market. While not extremely bearish on the outlook for cake and meal, I feel that the influences surrounding the market are not particularly encouraging for higher prices. The high protein feed should continue below $40 a ton in the southern belt for some time yet.

Linseed Meal

Linseed cake and meal, which I have urged buyers to purchase sparingly, is on the downgrade, but has not yet declined sufficiently to warrant any accumulation of stocks. The flaxseed product is available around $54 a ton, basis Minneapolis, the important crushing point of the Northwest, and around $50 to $52 a ton at Buffalo and nearby crushing centers. Offerings are being pressed on the market, and advices from the north indicate that crushers are holding comparatively large stocks. Linseed feed is still too high compared with cottonseed cake and meal, and further declines in prices should occur.

Alfalfa hay probably more than all other commodities is feeling the effect of the credit strain in the South and the lessened dairying prosperity of the East. There is a light demand for hay, but the movement from the producing districts of the West is of insignificant proportions and consequently the market shows outward signs of strength. The exorbitant freight rates on hay are seriously interfering with the movement of alfalfa, and offerings on markets are coming from a narrower territory than for some years. The shippers located at points distant from markets, from whom the bulk of supplies normally received at this season, must pocket a loss on their sales based on the current prices for alfalfa, the high freight rates absorbing more than half the purchase figures. This is a bullish argument in the alfalfa market, for it is plain that the sections enjoying favorable freight rates cannot supply more than a meager portion of the demand. On the other hand, farmers are pocketing losses on many of their products, and the time may approach when they will unload their alfalfa the same as other commodities. Demand should broaden in volume, but not sharply, and close observers of the trade express doubt whether the present range of $14 to $27 a ton on alfalfa in Kansas City, the largest market, will be materially changed for the remainder of the fall and early winter period. Hay is abnormaly high compared with corn and oats.

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75 Head Fine Bred Holstein CATTLE
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Nice big April hatched pullets, mixed breed. 10 for $17.50; 50, $83; 100, $165. May hatched. 10, $16; 50, $78; 100, $155.
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Farm range, prize winning Buttercups. Investigate this wonderful variety. Write for circular.
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FOR SALE—PULLETS, early hatched White Leghorns. Barron's best stock. Now [illegible] $2.00 each.
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Colt Carbide Gas light is so near actual sunlight that it fooled the hens into working summer hours in winter weather.

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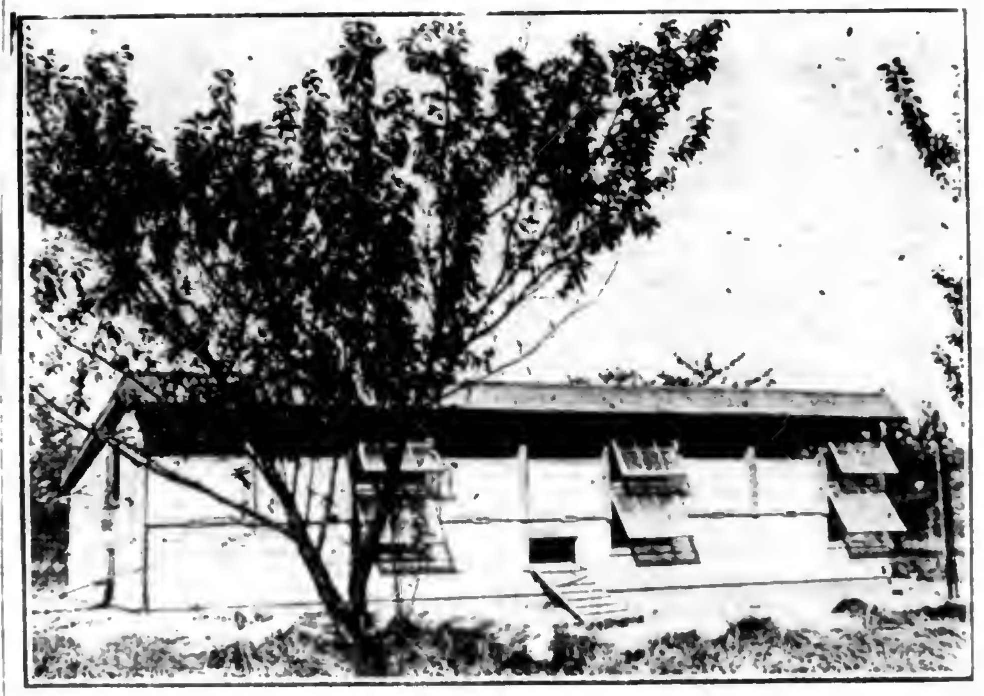
POULTRY

HOUSING POULTRY

The house for the farm flock should be constructed with the following principles in view: (1) Economy; (2) convenience; (3) light; (4) freedom from moisture; (5) abundance of ventilation; (6) plenty of room; (7) protection against excessive heat and cold; (8) proof against rats and mice; (9) sanitation.

It is not always necessary to purchase all new lumber for the house. Often old farm buildings and second hand lumber can be used to good advantage. Good lumber is necessary for the sill and frame and to assure rigidity, but the better grades of lumber are not needed for the roof and side walls. Second handed boards covered over with a good grade of roofing paper are quite satisfactory. The house should be planned and built as plain as possible. Fancy trimmings and fixtures are more detrimental than beneficial.

In planning the house one should give thought to practical labor saving devices; such as means for easy cleaning; large dry mash hoppers, handy drinking vessels, convenient feed boxes, etc. The convenience of cleaning and changing of litter should by no means be overlooked.



Light serves two purposes. First, it serves as a germ destroyer; second, it helps to make the surroundings more congenial. Thus acting as a tonic for the birds to exercise more freely and consume more feed; two essentials for good egg production.

A damp house is liable to cause sickness directly besides encouraging the growth of bacteria. Moisture in poultry houses always has been considered a serious problem. But recent experiments have proven that good ventilation is the best solution of this problem.

Ventilation is necessary to furnish fresh air, drive away moisture, and serve as a general disinfectant and health preserver. Good ventilation can be accomplished by placing six-inch galvanized pipes nearly touching the floor and extending thru the roof. But a more practical method is to have the open muslin front. Instead of having glass in all the windows, stretch muslin across some of the openings during the winter months.

Birds will stand considerable cold, if they are not in a draught and the house is dry. In fact birds do better in cold, quiet air than in warmer draughty air. Extreme heat in the summer is sure to decrease the egg production. It can be partly overcome by the presence of shade and by allowing a free circulation of air thru the house.

Plenty of room for exercising is essential for all breeds. About four square feet of floor space should be allowed for each bird. Exercise can be encouraged by feeding the grain in a deep open litter.

Rats and mice can be combated by building good concrete floors. Rats play havoc with chicks and pullets, and are very fond of eggs. Both rats and mice are attracted by the grain and mash in the litter and hoppers.

Plainness in construction of the house is the keynote of sanitation. Extra equipment often times affords harboring places for lice, bacteria and mites. All internal fixtures should be movable so they can be thoroly cleaned and disinfected at frequent intervals.

To sum up the substance of this article never allow the poultry flock to get a heavy freeze. House them in time. Keep the house clean and attractive to the birds. The house should be built with economy, plainness, substantial size, light, temperature and venilation in view.—Harry H. Kauffman, Ind.

HIGH NORMAL LAYERS ARE BEST

In building up flocks of bred-to-lay poultry it pays to consider flocks averages and vitality. Hens with unusual records are often termed "sports" by some of the most reliable breeders of bred-to-lay poultry. Such a hen may not be able to hand down her laying ability to her progeny. A hen of high normal laying capacity might be table to produce many good pullets and also cockerels which could transit laying powers to their offspring.

Such a hen might only lay 160 eggs per year and yet be of more value in building up a flock than the hen which laid over 200 eggs. Because one hen in a flock has laid 240 eggs, it would be no reason for speaking of that flock or their progeny as a 240-egg strain. We must consider hens as something besides machines. Nature has wonderful powers and they can be controlled but not exploited too much.—R. G. Kirby

PASSING EVENTS IN PICTURES

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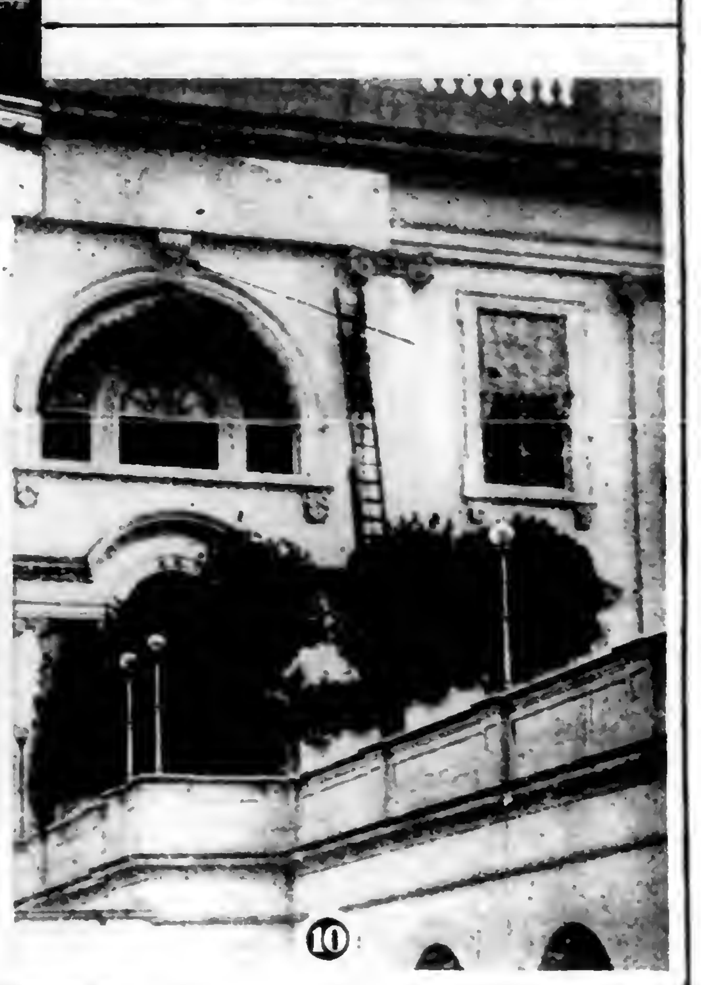
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1—English Colonel sailing for London to bring 50 English Farmer Families to Florida.

2—An excellent Aerial View of Ellis Island, the Haven of the Freedom-seeking Immigrant.

3—Negro Woman—Mary Seymore—running for Legislature in Massachusetts

4—Rare Specimen of Owl Faced Monkey from Paraguay just presented to Boston Zoo

5—U. S. Naval Academy and grounds at Annapolis, Md.

6—Children at the Community School, New York, who are fighting dispossession proceedings.

7—U. S. S. Salem, Scout Cruiser, going thru Gatun Locks, Panama Canal

8—Mrs. Mary Blue, of Waban, Mass., working on a table cloth. She is 81 years old and does a day's work every day

9—Ed R. Hardy, 12 years old, Columbia University Freshman. He speaks 12 languages.

10—Freeing the White House from caterpillars

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The dams of these calves are now making creditable year records.

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FORSALE 100 Reg. O. I. C's. o. the big fancy type of the very best blood lines of the breed. Very low priced and every one guaranteed to please. **C. E. CASSEL** Hershey, Pa.

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Thanksgiving Day, Thursday, Nov. 25, 1920. Donegal Herd Registered Durocs will sell 50 head consisting of tried sows, spring gilts and boars, fall pigs of good type and breeding. Get a catalog.
RAYMOND B. ZOOK, Mt. Joy, Pa., R. F. D. No. 1.

25% Reduction on all Durocs
to close out quick. No stock excepted. Excellent opportunity to improve your herd, at right prices. State wants quickly.
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All ages. Bargains in bred gilts and boars of all ages. We are overstocked and the price is right.
ELM GROVE STOCK FARM, Cortland, N. Y.

CRYSTAL SPRING STOCK FARM, Seelyville, Pa. Offer 20 registered Berkshire gilts of April farrow weighing 185 to 200 pounds, by Symboleer's Masterpiece, the wonder boar and son of our American Champion, Symboleer's Junior. 2 boars suitable to head the best herds anywhere.

REGISTERED DUROCS—Fall pigs both sexes for sale. Also a few mature animals including a good boar. Good breeding. Right type. Northumberland Co. Duroc-Jersey Breeders' Assn., J. M. Fry, Corresponding Sec'y, Sunbury, Pa.

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Large Berkshire Swine Registered High Grade. Prices reasonable. Write **HOME FARM,** Center Valley, Pa.

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Bargains in Berkshires
Over 100 pigs for sale of the best breeding money can buy. Sired by Goliaths Sequence 285329, a grandson of Epochal and out of large prolific granddaughters of Grand Leader 2nd. Nicely weaned 8 to 10 weeks old pigs. Boars $10, Sows $12. Registered and transferred. Also one tried service boar and 3 gilts 1 year old. This stock is sold to be as represented or money back.
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REGISTERED DUROC-JERSEY PIGS
$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs. C. W. Ellis, Jr., Maple Lawn Farm, Cortland, N. Y.

EDGEWOOD HAMPSHIRES
Everything sold. Booking orders for gilts bred for fall farrow, and pigs for Pig Club work only.
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VIEWMONT FARM, Mainsville, Pa., offers choice O. I. C. 150 to 175 lb. April and May pigs, from sires and dams out of National Grand Champion boars. Reg. free. Shipped C. O. D.

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HEAD YOUR BERKSHIRE HERD with a son of Highwood Majestic 19th. Pigs from spring and fall farrow. Write for prices and pedigrees. **MARVIN BEACH,** FRANKLIN, N. Y.

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ROSECOYD FARM'S Durocs of Quality. Well kept, well bred, well fed. **O. M. STOUDT,** Hershey, Pa.

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Big Type Poland China. Sired by Chief Lad, a grandsire of Mountain Giant, the $5,000 hog. Papers fur. Satisfaction guaranteed. **J. S. Funston,** Amberson, Pa.

REG. O. I. C. pigs all ages, selected stock, attractive prices. **BRUBAKER BROS.,** Star R., Cocolamus, Pa.

REG. O. I. C'S, all ages. Open and bred gilts at prices to move them. Black Diamond Minorca Farm, Mt. Bethel, Pa.

NELSON'S BERKSHIRES. Fall pigs, $10 each. Some nice spring gilts and boars priced to sell. **W. D. NELSON, JR.,** PORTER, DEL.

BERKSHIRE PIGS, $10 and $15, from an 800 lb. 2 year sire. Also service boars. **G. E. TANGER,** York Springs, Pa.

CHESTER WHITES For Sale. Service boars and young pigs, all ages. **ALLAN R. MORTON,** ASHVILLE, N. Y.

Miscellaneous

Chester Whites and HAMPSHIRE SHEEP. Write your wants. We can please you. TWIN BROOK FARM Newville, Pa.

WANTED A thorobred St. Bernard or Newfoundland puppy. **P. R. SHRIVER,** Taneytown, Md.

PURE BRED GEESE, Ducks, Turkeys, Chickens, Guineas, Dogs, Hares. Prices reasonable. Catalog free. **H. H. FREED,** Telford, Pa.

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Fox, Coon, Skunk, and Rabbit Hounds; also puppies and started dogs. Buy now and know your dog when the season opens. Stamp for reply.
H. C. LYTLE, Fredericksburg, O.

BRONZE TURKEYS for breeders. Young gobblers $10 and $12. Old Toms, $15. Pullets, $7 and $8. Ready to ship after Nov. 15. **JESSE McLAUGHLIN,** Reinersville, Ohio.

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COUNTY NOTES

Union Co., Pa.—This county held its fair from the 12th to the 15th of October and was a grand success in a financial way as well as in attendance and interest. On Thursday over 800 tickets were sold in addition to the children, stockholders and persons who went in on passes. On account of the farmers being so busy and behind with their work the diplays in grains, fruits and vegetables were not up to the average for this fair, but the pig club made a display of their pigs and the cattle exhibit was fair and the poultry house was well filled. Taken as a whole, it was a very successful fair, considering that the Milton fair, only five miles away, was held on the same days, with a big attendance also.

Seeding is about finished and corn is mostly cut and some farmers are husking corn. Picking apples, threshing clover seed, which is averaging better than a bushel per acre, and threshing grain are the jobs being done. The milk business is in bad shape, as Nestle's Food Company refuse to buy whole milk, but they separate milk for some patrons who still take milk to their plant in Lewisburg, and will pay some price for butter after deducting all overhead expenses, but do not promise to patrons to pay even the market price for butter. So most farmers are separating their milk at home, and are selling their cream to butter factories or creameries in adjoining counties.—J. N. Glover.

A GREAT WAYNE CO. COW

Alma Segis Colantha, owned by Mr. H. G. Vail, of Damascus, Wayne County, has broken the Pennsylvania State record for combined milk and butterfat production. She produced over thirty pounds of butter from 653 pounds of milk and is only a four-year-old. The sire, Dutchland Colantha Artis Lad, is a son of Colantha Johanna Lad and one of the best bulls brought into Wayne Co.

WAYNE CO., PA., BREEDERS' ASSOCIATION

On Friday, October 29, occurred the organization of the Wayne Co. Breeders' Association. The election of officers resulted as follows: President, Mr. Thomas Oliver; vice president, Mr. Fletcher Coons; treasurer, Mr. Arthur Robinson; secretary, Mr. W. E. Wakely, County Agent.

The association will conduct a sale of good purebred bulls the latter part of November. This promises to be a noteworthy event as the best stock will be for sale. D. M. Eno is chairman of this project. Mr. R. R. Welch, one of the foremost authorities on bull associations, explained the plan for community breeding at a recent meeting of the association. Other speakers were Mr. F. P. Weaver and Dr. Howard C. Reynolds.

FARMERS' INSTITUTE DATES

The schedule for the Farmers' Institutes in the twenty-three counties comprising the northern and western sections of the State has been practically completed by the Pennsylvania Department of Agriculture.

The Institute schedule will be started earlier this year. In an effort to clean up the northern and western counties before the advent of the mid-winter weather.

Last year the Institute work was seriously handicapped by the severe weather, this being particularly true in the north tier counties, where speakers found it difficult to travel about and maintain their schedules, while the attendance was also affected by the same conditions.

Following is the schedule of Institutes by counties, as so far completed, the program for the southeastern section of the state not having been arranged as yet:

Crawford County, Nov. 15-16-17-18.
Mercer County, No. 19-20-22.
Venango County, No. 23-24-25.
Warren County, No. 26-27-28.
Erie County, Nov. 30—Dec. 1-2.
Forest County, Dec. 3-4.
McKean County, Dec. 6-7-8.
Potter County, Dec. 9-10-11.
Luzerne County, Nov. 15-16-17-18.
Lackawanna County, Nov. 19-20-22.
Pike County, Nov. 23-24.
Wayne County, Nov. 25-26.
Susquehanna County, Nov. 27-29-30.
Bradford County, Dec. 2-3-4-6.
Tioga County, Dec. 7-8-9-10.
Cambria County, Nov. 15-16-17.
Jefferson County, Nov. 18-19-20.
Clarion County, Nov. 22-23-24.
Butler County, Nov. 25-26-27.
Beaver County, Nov. 29-30-Dec. 1.
Greene County, Dec. 2-3.
Washington County, Dec. 4-6-7-8.
Fayette County, Dec. 9-10-11.

TAKE UP PLANS FOR FARM PRODUCTS SHOW

Pennsylvania's Fifth Annual Farm Products Show, which will surpass anything of its kind ever before attempted in this state, will be staged in Harrisburg, January 24-28. With arrangements for the exhibition halls practically completed and with more than 60,000 square feet of floor space available, the indications are that the show this year will be almost fifty per cent larger than in 1919, when all records were broken.

The show, which is held under the direction of the Pennsylvania Department of Agriculture and the agricultural organizations of the State, will bring together the choicest products of field and orchard from every section of the State. The prize winners will be entitled to the highest honors the state can bestow for agricultural achievement, for in competition will be the prize winning entries from county fairs and farm shows held thruout Pennsylvania.

The premium lists have been enlarged and made more attractive and with an unusually abundant harvest this year and with an unprecedented fruit crop, the showings are expected to be far and away the best that have ever been shown in Harrisburg.

The county farm agents in the various counties of the state are actively co-operating with the officials of the Department of Agriculture and as the season for corn husking and apple picking nears its zenith, the agents are interesting the farmers and orchardists in preserving their choicest product for exhibition at the show. The apple show alone, this year, will be a feature that will bring visitors to Harrisburg from all parts of the state.

The speakers that will address the various organizations and groups of farmers will be furnished by the Pennsylvania Department of Agriculture and the Pennsylvania State College Extension Service, and this list will include experts of State and nation-wide reputation, who will discuss the subjects with which they are familiar.

Brown sugar instead of white will glorify that evening dish of mush.

A Holstein Cow Twenty Years Young

The wonderful vitality which is characteristic of the purebred Holstein-Friesian breed is strikingly shown in the career of Jetske Roe's Aaggie's Artis. When twenty years old she dropped her sixteenth calf. For fifteen gestation periods she totaled 232,500 pounds of milk which, at 4 cents a quart, would be $4,620 at a cost for feed for fifteen years amounting to $1,980. She thus showed a profit of $2,640 in addition to which must be reckoned $6,000 worth of fine, healthy calves. She won many ribbons and prizes at fairs, and has seven daughters with A. R. O. records.

Send for our free booklets—today.
THE HOLSTEIN-FRIESIAN ASSOCIATION
218 Hudson Street
Brattleboro, Vermont

Public Sale
to be held at
White Hall Farm, Waynesboro, Pa.
2 Miles East
Tuesday, Nov. 23, 1920
30 HEAD OF
REGISTERED GUERNSEY HEIFERS

A very promising lot good individuals and well grown, ages are 6 months to 2 years. These heifers are grand-daughters of such sires as Bob Rome, Glenwood's Mainstay 40th; Dimple Bloom and others of equal breeding. About half of these heifers are bred to a grandson of King of the May.

Registered Durocs—a few good boars of March farrow and some extra good fall pigs. Sept. farrow, both sexes. Orion and volunteer blood lines. Catalogues on request.

J. HARLAN FRANTZ, Waynesboro, Franklin Co. Pa.
Electric cars pass farm every hour. Stop No. 11.

Bull Calves At Farmers' Prices
We offer farmers an exceptional opportunity to secure a "King of the May" "Golden Secret" Bull Calf at farmers' prices. This calf is from a clean, healthy, tuberculin-tested herd and is sired by Brookmeads Royal Master of Riverview No. 50363, who is a brother to Langwater Steadfast No. 31672, the bull that sold for $25,000 at the Langwater Sale, Sept. 21, 1920, the record price for the breed; is also brother to Langwater Stars and Stripes 2nd, who is Brookmead Farms' great herd sire; and grandson of Imp King of the May, who now has 30 A. R. daughters who exceed 622 lbs. butterfat; and is also sire of the famous cow Dolly Dimples May King of Langwater. Calf beautifully marked, real fawn and white. If you want a sire you'll be proud of, at a reasonable price, here's your chance.
RIVERVIEW FARMS, SWARTHMORE, PA.

Yearling Holstein Bulls
Ready for service, well-grown, and extra good individuals. They are from tested dams of Ormsby, Veeman, Lyons strains, and are sired by King Lyons Ekster Lad, a prize winning son of King Lyons, sire of nine 30 lb. cows. To make room, will be sold at bargain prices.
I. R. FOSTER & SONS, Owego, Tioga Co., N. Y.

STEVENS HOLSTEIN FARM
of Cortland, N. Y., offers pure bred cows and calves, all ages; also extra high grade Holstein heifer calves $20 each, express paid in lots of 5; 2 heifer calves with purebred bull calf $75. Grade Holstein cows in carload lots. Wire me to meet you.
PAUL H. STEVENS, Prop.

WANTED A HOME
for choice registered and high grade Holstein-Friesian heifer and bull calves, $25 and up. Write us your wants. Browncroft Farms, Cortland Co. McGraw, N.Y.

ORIGIN FARM
Hornless Holsteins, Registered and A R O animals, all ages, for sale. Federally tested.
GEO. E. STEVENSON, SCRANTON, PA.

TWO GRADE HOLSTEIN HEIFERS, 11 months old, well grown, from cows that give 10,000 lbs. milk each in one year. Bargain at $50 each.
OAKS DAIRY FARM, WYALUSING, PA.

MILKING SHORTHORNS—Young bulls, a few cows, and young heifers of the best breeding.
C. M. KENNEDY & SONS, ULSTER, PA.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale.
MILLARD E. BASEHOAR, Littlestown, Pa.

Ayrshire Bull Calves From high record A. R. Dams.
ROBERT TEMPLETON & SON, ULSTER, PA.

PUREBRED BROWN SWISS CALVES, for sale. Come and see the goods.
G. E. BOWN, Forksville, Pa.

Reg. Holstein Bull Calves, from officially tested dams and a 30-lb. sire. Write for prices, pictures and pedigrees. **Walter M. CRUTTENDEN,** Forty Fort, Pa.

SUNNYBROOK GUERNSEYS
40 head, free of tuberculosis, bull calves for sale.
EDWIN B. MAULE, COATESVILLE, PA.

3 REGISTERED Guernsey bull calves of good producers. 7 and 8 months old. H. L. BALDERSON Mgr. Silver Lake Farm, Newton, Bucks Co., Pa.

Reg. Holstein Bulls from calves to serviceable age. Herd tuberculin tested under Federal and State supervision. **BONNYMEADS Farms,** Harrisburg, Pa. R. 1

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Bog Spavin.—Last week my 8-year-old mare sprung what I believe to be a bog spavin. We worked her another day and the hock joint is swollen and tender. Since resting she is some better, but joint is swollen and hot and I yet believe it bog spavin. I am informed it can be cured by blistering. F. L. G., Frankford, Del. The mare should have rest. If joint is inflamed, apply the following lotion 3 or 4 times a day. It is made by dissolving ¼ lb. acetate of lead in one gallon of cold water. It is considered good practice to clip off hair and apply one part powdered canthradies and four parts fresh lard twice a month.

Lice.—I have an old horse that is troubled with pigeon lice. Have applied kerosine, tried tarred rope around neck, black flag, also coal-tar disinfectant. Have fed him oil meal and sulphur, but without good results. J. J. C., Egg Harbor City, N. J. You will find gray mercurial ointment a valuable remedy for killing lice on horse. One part Creolin mixed in fifty parts water will kill lice. It should be applied 3 times a week for a week or two.

Chronic Garget.—Have Holstein cow that has raised four claves. Came fresh two months ago. Since then she has had more or less udder trouble. The bunches in bag don't bother in milking. C. D. M., Blue Ball, Pa. Apply one part iodine and ten parts fresh lard to bunches once a day, for few days, then not so often.

Indigestion—I have been reading your valuable veterinary column but fail to find a case like mine. Have cow that has been eating too much corn and corn stalks, also one that ate too many apples. My remedy has been to give one pound of epsom salts, followed by giving baking soda. She has been in a weakened condition for the past two weeks. B. G. L., Truckville, Pa. Give her four drams of dilute hydrochloric acid in one quart of cold water as a drench, or in drinking water, after meals, 3 times a day.

Caked Udder—Tuberculosis of the Udder.—I have a 6-year-old Jersey cow, which has been a heavy milker but has caked udder of long standing. She milks about a quart from 3 teats, and yellow water comes from other teat. I have tried all the remedies I ever heard of, and none of them have seemingly done any good. Half of the bag is very hard. If cured, she is a valuable cow. W. S. W., Alloway, N. J. First of all you should have her tuberculin tested, for she may have tuberculosis of the udder. If so her milk is unfit for use. Furthermore, if she reacts to the test, you can dry and fatten her for beef. Kindly understand her carcass might not pass meat inspection. If is possible to make her much better by rubbing caked portion of udder daily with iodine ointment.

Cow Pox.—I have a cow whose teats break out in little boils. Sores dry up, become scabby, then later on more sores appear. Can she be cured? B. H., Paxton, Pa. Dissolve one ounce of hyposulphite of soda in one quart of clean water and apply to sores 3 times a day. Occasionally apply tincture of iodine to sores.

Stop Barn Cleaning Drudgery

WM. LOUDEN
Originator of modern labor-saving barn equipment.

LOUDEN
Litter Carriers

Take all the drudgery out of barn cleaning. There is no other job on the farm that the boy, the hired man, or even the farmer himself hates worse than to clean the barn with the time-wasting, back-breaking, dirty, old-fashioned wheelbarrow. The treacherous, slippery plank keeps you from going hub-deep into the slush—but it's a real job to stay on it.

Cleans Barn in Half the Time

The Louden Litter Carrier removes the manure from behind the animals and dumps it directly into a spreader or some out-of-the-way place. Cleans the barn in half the time. A 12-year old boy can do the work quicker and easier with a Louden Litter Carrier than a husky man could with the old-fashioned method.

The same labor-saving features and high quality workmanship which have been built into Louden Litter Carriers, are found in Louden Feed Carriers, Sanitary Cow Stalls and Stanchions, Animal Pens, Hay Unloading Tools, Power Hoists, Manger Divisions, Ventilators, Barn and Garage Door Hangers, Water Bowls—"Everything for the Barn." 224-page catalog giving full details, sent on request. No obligation.

The Louden Machinery Company
5317 Court Street (Established 1867) Fairfield, Iowa

Two Splendid BULL CALVES
sired by my herd bull, Golden Rose's Successor (152866), a double grandson of Bedas May King and carrying 75 per cent of his blood. Bedas May King has 23 A. R. daughters with an average credit as mature cows of 616 pounds of butterfat. No. 1 Calf, born Sept. 12. Dam is Imp. Uneeda Wideawake of Mara Alta. She produced 6470 pounds of milk and 291 pounds of butterfat with her first calf and 7133 pounds of milk and 326 pounds of fat with her second calf, in cow-testing association. No. 2 Calf, born September 21. Dam is Amity Betty. This is her first calf but a full sister in the herd produced 425 pounds of fat with her first calf.
Price of each bull $75 when nine weeks old, or less, if taken before.
Hugh Fergus, Slippery Rock, Pa.

GUERNSEYS
Organization means Progress. Join your local Guernsey Breeders' Association. Let us tell you what your community can do.
The American Guernsey Cattle Club
Box M 93 Peterboro, N. H.
QUALITY ECONOMY QUANTITY

MAPLE LAWN HOLSTEINS
High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.
C. W. Ellis, Jr., Maple Lawn Farms, Cortland, N. Y.

Registered and Grade Holsteins
Get busy you calf club promoters. I have 50 registered heifer calves, 3 to 10 months old, $100 each for the lot, choice $125.00. 200 registered and high grade cows, heifers and bulls. Car of any age that you want. ⅞-Holstein heifer calves, $20 each. Express paid in lots of 5.
J. C. Reagan, Tully, N. Y.

SMITHSON HERD, REGISTERED HOLSTEINS
Two excellent young bulls by 32-lb. sires. Twenty Females, calves, heifers and bred cows. Must be sold before winter.
G. SMITH & SONS, Honesdale, Pa.

BULL CALVES at BARGAIN PRICES
We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred, healthy bulls, from a clean, Tuberculin Tested Herd at reasonable prices. King of the May—Dolly Dimple—Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees.
WAWA DAIRY FARMS, 22 S. 32nd St., Phila., Pa.

FOUR HOLSTEIN HEIFERS
Well grown, grand-daughters of the $50,000 bull from A. R. O. cows. Bred to our excellent herd sire, from heavy producing ancestors. To freshen during January and February. Under Federal supervision. TESTED—Never any reactors. Price $8[illegible]
S. A. MILLER, West Branch Farm, Linden, Pa.

HOLSTEIN-FRIESIAN CATTLE
Bull calves sired by King Lyons Cantrella Pontiac, No. 275643, and from dams with good records, calves light in color and priced reasonable. Herd under Federal supervision. Write us your wants, we will give price and pedigree.
[illegible] Fleming, Elm Brook Farm, Alba, Pa.

RUGGED PRODUCING AYRSHIRES
The herd has a strictly business atmosphere and they are bred for maximum production of milk and butterfat. If you admire the lines of a producer, they will appeal to you as the premier show type. Our present offering is one choice bull calf from the best blood in the herd and backed by excellent records. Also a couple young cows and heifers. Herd tuberculin tested, no reactors.
CRESTMONT FARM, 31 N. FOURTH ST., SUNBURY, PA.

Bradford County, Pa. For more than a quarter of a century this county has been well known throughout America as a center for producing good livestock. Today over 250 breeders are engaged in breeding registered Holsteins, Jerseys, Ayrshire, Guernseys and Milking Shorthorns of such quality and prices as to attract the beginner or the established breeder.
There is now available for immediate sale a limited number of both sexes of the above mentioned breeds. Special Offer Now: Two Registered Holstein bulls 1 year old, well grown, excellent type. Federal tuberculin tested. A. R. O. records. Price $175 each. Address inquiries to
D. K. Sloan, Secretary, Bradford County Livestock Breeders' Association
TOWANDA, PENNA.
Office in Court House with County Farm Bureau

Water, Milk and Money

If water were labeled H_2O, - and sold by the barrel at a fancy price -

more might appreciate its value in the dairy cow's ration and its importance in the making of milk.

A cow makes milk from two things: Feed and water.

Feed costs money, and yet very few of our dairy cows are being starved for want of it.

It is common knowledge that the cow that does not get enough to eat does not produce as much milk as she could produce, nor produce as cheaply.

It should be common knowledge, too, that the cow that does not get enough water to drink produces too little milk.

Water costs practically nothing, and yet many, very, very many of our dairy cows thirst for want of it.

Milk is seven-eighths water.

In order for a cow to make milk most cheaply it stands to reason that she must be given plenty of water.

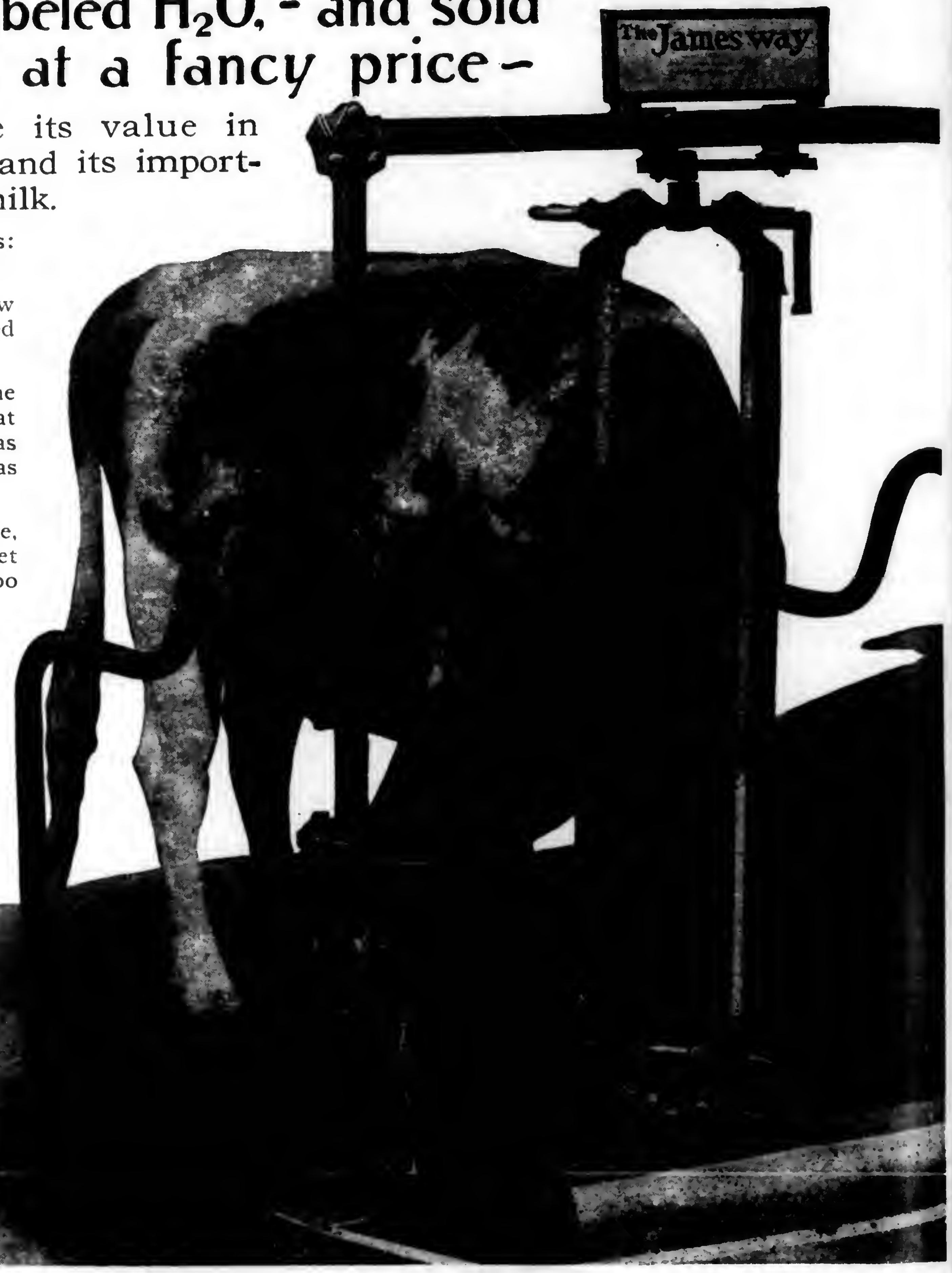
Thousands of dairymen have learned that they have been getting too little milk in the past because they gave their cows too little water.

Herded out twice a day to shiver through a drink of ice tank water

They have learned that when a cow has all the water she wants when she wants it at any hour of day or night, remarkable increases in milk yields follow.

Yet there is no magic about it.

It is simply the natural consequence of following out natural laws. Just as too little feed meant too little milk — lack of enough water means less milk and a higher production cost.



Proven By Milk Records

An investigation was made in 28 herds (759 cows) where milk records were kept.

One herd showed an increase of from 5 up to as high as 10 lbs. per cow, per day, just as a result of giving the cows all the water they wanted when they wanted it.

Four herds reported an average increase of 4 lbs. per cow, per day; three stated 3 lbs.; five showed 2 lbs., three 1½ lbs.; one ¾ lbs.; one reported an increase in milk yield valued at $8.56 per cow, per year; one averaged $5; one $10; one received 3% increase; one 8%; two 10%; one 12½%; one 20%; one 33⅓%; and only one herd out of the 28 found that the increase was "not much." An average increase per cow per day of 2.45 lbs.

And now you ask yourself the question, "Can I afford James Cups in my barn?" "Would it not be better to wait until next year?"

Neither of the questions has anything to do with the matter.

The real question is "Can you afford to be without James Cups?"

You Lose By Waiting

The plain fact is that if next year some one were to make you a gift of the James cups, you would lose money by waiting.

Two pounds milk per cow per day, for the 200 days the cows are in the barn, means 400 lbs. of milk, which at $3 per cwt. is a total of $12 for the season.

In these days when feed and other costs are high, can you afford to neglect this extra profit?

James cups will pay for themselves twice over during the season. Can you afford to be without them?

James cups will save much time and work — investigation shows that the labor saving is $2.50 at least each year.

Can you afford to continue the frost biting work of chopping open the ice bound tank out of doors?

Can you afford to continue feeding the bothersome tank heater through the chilly winter days?

Don't put off this drinking cup proposition a single day. Write us at once for a definite price estimate covering a drinking cup installation in your barn.

We will quote you a definite price if you will tell us the number of stalls, of calf pens, of cow pens, of bull pens for which you want cups and whether the stalls or pens are wood or steel.

Barn Book Free

If you are interested in other labor saving equipment for the dairy barn such as cow stalls, carriers, steel pens, ventilators, etc., or if you are interested in up to the minute ideas in the planning of the new barn, ask also for our big barn building and barn equipment book "The James Way No. 20."

James Manufacturing Company, Elmira, New York

The James way

Labor Saving Equipment for the Dairy Barn

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PENNSYLVANIA FARMER

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THE KEYSTONE OF
NATIONAL PROSPERITY

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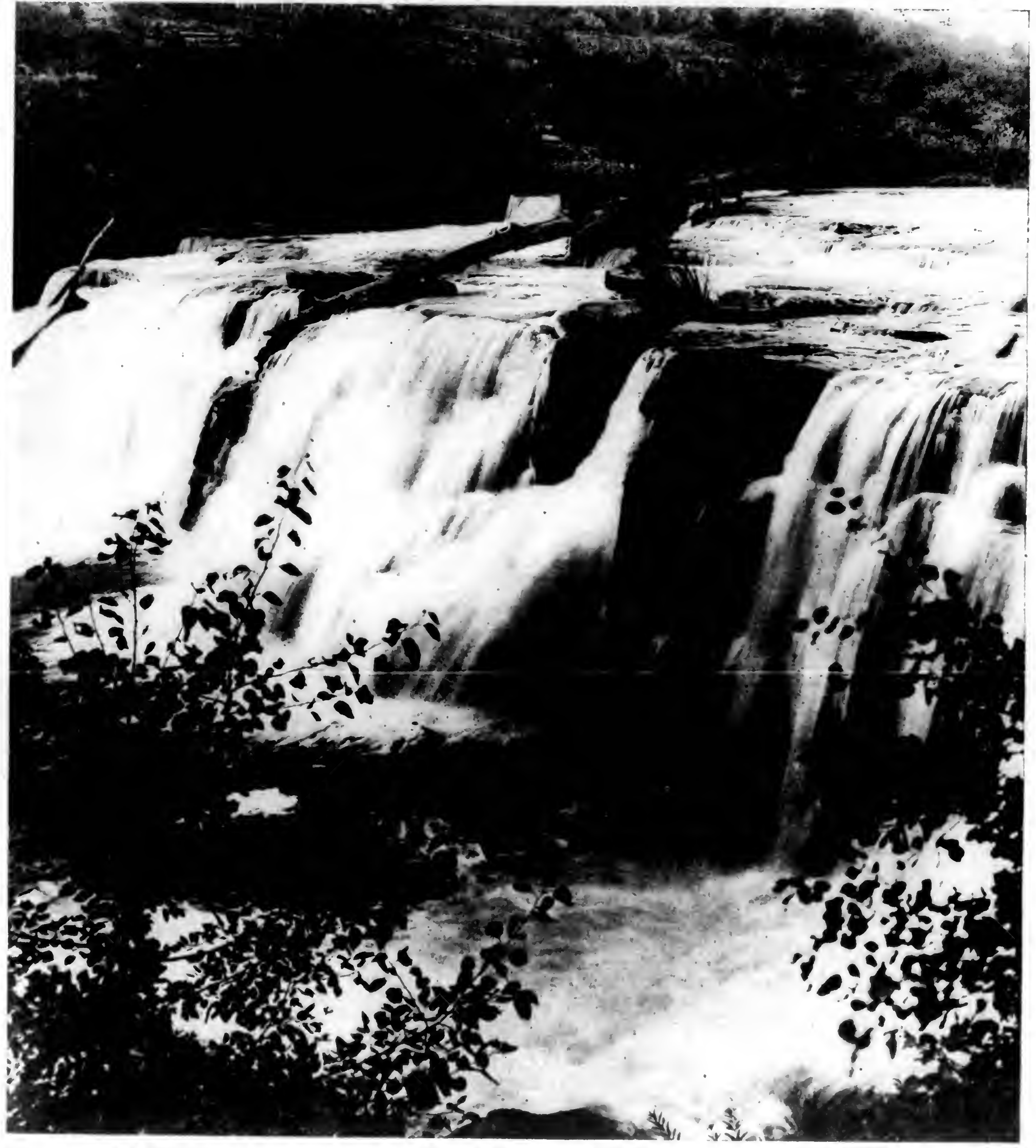

Growing Late Crop Potato Seed

Some Figures on Cost of Growing Them in New Jersey---By R. L. Scharaing-Hausen

Because of uncertain results from the use of northern grown potato seed, due largely to disease, growers in New Jersey have been investigating other sources, and have found that local grown, late crop seed gives very good results. Such seed has been grown in Mercer County, N. J., for about six years. I started to grow it about three years ago—one of the first in my locality. Since then, a number of farmers in the vicinity have produced a small acreage every year. We are not in the potato belt of the county, however. The potato does best in a cool climate, and for that reason seed from Maine or New York has always been much more dependable than seed selected from the local main crop, which ripens during the heat of the summer at a sacrifice of vitality. The local late crop, planted about August 1, ripens during the cooler months of September and October; it is usually immature when dug, and possesses all the vitality of northern seed, and close inspection while growing can insure its freedom from disease. Late crop seed has one peculiarity; it is slower to start than northern seed. This does not affect the yield, however, and except to the trucker who is after very early potatoes, is a matter of no importance.

The farmer who wants to produce late-crop seed should secure the very best seed obtainable in the spring, and place it in cold-storage until the middle of July. It is important to get the potatoes out of storage in time to let them warm up in the light for about ten days before being cut, at which time they should show short heavy green sprouts. Aug. first is a good time to plant them; the seed will be just as good if planted later, but there will not be so good a yield. Normally the vines are killed by frost before the crop matures, so there will be a good many seconds, and the total yield will not be as large as the spring crop. Everything except the smallest "marbles" is good seed, however. An average yield of late crop cobblers is about 100 bushels to the acre, altho much higher yields can be secured. Production of late crop seed offers several advantages to the general farmer and the trucker. Perhaps a little summary of the good and bad points of the crop, together with the story of my own crop for this year, and a set of cost accounts, may prove interesting.

A 16-Row Potato Sprayer at Work in a New Jersey Field

One of the biggest points in favor of the late croppers is the fact that they may follow something else and so give two crops from the same ground in one season. They do very well where the hay stubble has been plowed under as soon as the crop has been gotten together, or they can even follow wheat or rye, altho they do not yield quite so well, as the grain removes more moisture and fertility than the hay, as a rule. They can also follow strawberries, early cabbage, peas, early potatoes, or some other early truck crop the same season. This means that the crop can usually be grown without disturbing the rotation. Another favorable item is the fact that late croppers are "easy" to grow. By this I mean that as a rule on properly prepared ground few weeds grow during the late summer. Where the early crop may require hoeing to keep it clean, the late crop seldom needs more than a few cultivations. And where the early crop needs careful spraying against the potato beetle, the late crop seldom shows one—unless it should follow early potatoes. Disease is also less troublesome. Again, the potatoes bring up the fertility of the soil. Where a sod is turned down for the tubers, a large amount of fertilizer applied, and a cover crop of rye got in immediately after digging, the next year's corn certainly shows where the potato patch has been. Lastly, the potatoes require no sorting, everything except the smallest culls is good seed.

The disadvantage of the late crop, where a satisfactory yield is secured, are these: A conflict of labor with hay and grain harvest. When the crop is planted and the ground prepared, and another conflict with corn husking and apple picking in the fall. This conflict may not be important unless the acreage of seed is large. Besides these, a man's money is usually tied up until the spring, and it is necessary to store the potatoes over winter to find the best market.

This year I had a little over an acre of late-crop cobblers. They were planted on a piece of ground that had just yielded a good crop of clover hay. The land was plowed July first, rolled, disked and harrowed. It was again worked just before planting, and was in excellent condition. The piece was planted August 4th, with twelve bushels of seed. This seed was descended from the first lot I got three years ago. I have made a practice of saving out enough late crop seed in the spring for the early planting and enough to store for the late planting. My last late crop was the best of the lot, which rather disproves the theory that seed will "run out" if not changed every year. I used about a ton of home mixed fertilizer, composed of the following ingredients: 1700 lbs. acid phosphate, 120 lbs. German potash, 150 lbs. sulfate of ammonia; roughly, a 2-13-3 formula. It will be noted that all the materials are readily available, which suits the requirements of the crop. Incidentally, I find that plenty of fertilizer containing potash is essential to any sort of good yield.

These potatoes were cultivated once before they were up, and run thru a couple of times afterward. They made a fine growth, with hardly a weed or a beetle in sight. They were dug about November first, at which time the vines had been killed, and the ground immediately sown to rye for a cover crop. The yield was somewhat more than 150 bushels, and of fine quality.

Here is a summary of the accounts kept on the crop:

Labor.	Man hours.	Horse hours.
Plowing and rolling	20	40
Disking	5	15
Harrowing	6	18
Borrowing planter and plow	3	5
Cutting seed	10	..
Mixing fertilizer	4	..
Planting	12	12
Cultivating	15	15
Digging	4	4
Picking up	58	..
Hauling and storing	16	8
Totals	153	117

12 bushel seed at $5	$60.00
Storage and transportation	12.50
1700 A. Phos. at $1.50 cwt	25.50
120 Potash at $9 cwt	10.80
150 Am. Sulf. at $5 cwt.	7.50
153 hours man labor at 42c	64.26
Supervisor, 10 per cent	6.43
117 hours horse labor at 20c	23.40
Rent of planter and digger	1.00
Total	$211.39
Cost per bushel (150)	1.40

There are other charges, such as interest, use of land, etc., to be brought against the crop, as well as cost of bags and further handling in the spring. Still, when potatoes cost $1.40 per bushel in the cellar, and table stock has been selling locally at 70c, one is not inclined to hunt up all the items on the debit side. In this case, the cost of seed was high, but only what I sold my surplus for when the potatoes were put in storage. The storing of seed for the late crop was done co-operatively thru the County Agent. Labor cost was another important item. It is probably true that potatoes cost more to produce this year than ever before, and with prices at a pre-war level, there has been a great loss to the growers thruout the country. Still, if the price should get up to $2 in the spring, it would mean a net gain of about $75 on this particular crop, which wouldn't be bad at that.

HINTS FOR WINTER MOTORING

The Carburetor.—Some adjustment of the carburetor is necessary as a "winter position." The main adjustment screw, as well as the lever that controls the heat shutter or air intake, should be adjusted, but the owner should not try to make the adjustment himself unless he is an expert mechanic. Even the best written instruction books are not any too explicit on the subject of carburetor adjustment.

In order to get the utmost mileage and satisfaction, it is well to take the car to an expert and have him adjust it so that it will run well without using an excessive amount of gasoline and yet not backfire because of too lean a mixture. Of course, in starting it is necessary to use whatever "choke" device there may be on the car. It should be remembered that when the choke is fully opened it admits raw gas, without any air. Therefore, after hearing one or two explosions of the motor, the choke should be reduced to one-half or one-quarter, so that the carburetor will draw a supply of warm air from the exhaust manifold. After reducing the choke and running five or ten minutes in this position, the choke should be returned to normal.

If the mistake is made of running the motor after it has been warmed up, without then regulating the wide-open "choke," the driver will not get the maximum mileage and, in fact, is apt to choke his engine to the point where it will not run at all.

The adjustment of the carburetor depends to some extent upon the ignition system used. This is especially true concerning winter driving. For example, if the car depends upon battery ignition there will be trouble in starting on a cold day, and, in spinning the fly-wheel with the starter the driver may be obliged to run down his battery to the point where it becomes weak, before he can get started at all.

This means that he will only have enough "juice" left to get going long enough to begin to recharge it, or he may have to run on the generator for a while, which is not good practice, and the driver with a magneto ignition will use less gasoline than if equipped with a batte

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Soils and Fertilizers

Conducted by Dr. J. G. Lipman

Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

PLANT FOOD AND HUMUS

Specialization in agriculture has its drawbacks as well as its advantages. For instance, fruit growers who may develop very marked skill in pruning and spraying may feel more or less helpless when it comes to economic and satisfactory maintenance of the fertility of their fruit land. Some fruit growers still regard manure as the material best calculated to supply humus as well as plantfood. Others depend on cover crops and commercial fertilizer. Still others think that small applications of commercial fertilizer, supplemented by weeds which spring up among their trees, is adequate for supplying the necessary nourishment to their trees.

Recent observations and talks with leading fruit growers have convinced the writer that there is much misinformation that needs clearing away. The average fruit grower should be told, or shown if possible, how commercial fertilizers may be used to best advantage. He should be given information more definite than he now has as to the value of humus in his orchards and the best means for maintaining a sufficient supply of humus. He should be supplied with information on the fertility and humus value of materials like stable manure, green manure, tobacco stems, wool waste and salt hay.

Some of the fruit growers in South Jersey are paying as much as $5.00 per ton for stable manure. They must haul this manure from their siding to their fields and must distribute it at a very considerable cost of labor. It is but proper to ask whether stable manure at $5.00 per ton is an economical source of plant food and humus for fruit growers. Assuming an average content of ten pounds of nitrogen and potash each and of five pounds of phosphoric acid per ton of stable manure, and making due allowance for the relatively low availability of a portion of these constituents, we must conclude that as a fertilizer stable manure has a maximum value of $3 to $3.50 per ton. To do any good it must be used at the rate of at least six or eight tons per acre, representing a cost of $30 to $40 per acre exclusive of the extra labor involved in its handling.

It is well known that in the case of heavier soils potash fertilizers do not increase the yields of apples. This seems to be the conclusion of the Massachusetts and New Hampshire Stations. Moreover, in the case of some derived from limestone or granite soils there is not very much response from applications of available phosphoric acid. However, all told, the use of acid phosphate, bone meal, or basic slag, accompanied by the use of green manures like vetch or clover capable of adding nitrogen to the soil, may be quite sufficient for supplying the maximum needs of growing apple trees. In other words, the humus problem in the case of apple, pear or peach orchards is more easily solved than it is in the case of annual cultivated crops. It is even doubtful whether, exclusive of fruit trees grown on the lighter soils, the use of nitrogenous fertilizers in fruit growing need receive particular attention. The average fruit grower should find it possible to maintain his humus and nitrogen by means of green manures and limit his fertilizer applications to phosphoric acid and potash wherever a response to these plantfood constituents is at all evident.

Is Potash Needed?

Does Dr. Lipman think potash needed on De Kalb soil, in Montour County, Pa.? No hay, straw or fodder has been sold off the place for 30 years. Phosphorus and hydrated lime have been applied with every crop lately, and about 35 acres of clover sod plowed down for corn and wheat. The farm was not limed until recently for 14 years. Crop yields as follows: Corn, 100 bushels; oats, 35; wheat, 18, and hay about one ton. Is there any way to tell by the appearance of a crop as to whether the soil needs potash as can be done when nitrogen is lacking? R. T. S., Montour County, Pa.

The need for applications of potash is determined both by the need of the crop and the need of the soil upon which it is grown. Many soils are deficient in potash. This is true particularly of muck and peat soils, as well as very light sandy soils. For these applications of potash may be needed irrespective of the nature of the crop grown. On the other hand there are crops like potatoes, sugar beets and tobacco which will respond profitably to applications of potash even though the soil itself is naturally well supplied with this ingredient. In the rotation consisting of corn, oats, wheat and grass, the corn and the grass crops will respond to applications of moderate amounts of potash. In the case of the corn, the use of 15 to 25 pounds per acre of actual potash, corresponding to 30 to 50 pounds of muriate of potash, would probably prove profitable. In the case of the grass, applications of 40 to 60 pounds of muriate of potash would be worth while. It is not likely that with the yields given, namely, 35 bushels of oats and 18 bushels of wheat, the use of potash on DeKalb soils for the crops in question would be a profitable investment.

"Clover Leaf" Farm, Westmoreland Co., Pa.

In very pronounced cases of potash hunger even an untrained eye may detect the symptoms in connection with crops like potatoes or tobacco. A very considerable amount of work has been done on this point in Germany and also in this country by the United States Department of Agriculture. Dr. Schreiner, of the Department of Agriculture, has described the appearance of potato plants suffering from lack of potash on one of the principal soil types in Maine. The foliage of the plants affected is at first of an unusually deep green color; later on a bronze color develops and the leaves gradually break up. In the case of the corn and the other crops named the symptoms are much more difficult to detect.—J. G. Lipman.

How One Man Does Two Men's Work on "Clover Leaf" Farm

LIGHT A DELIGHT

After considering the subject, "what I have added to our home that has added to its beauty, comfort or convenience," I believe that the installing of an electric light system has not only added beauty, comfort and convenience, but has benefitted us in many ways.

The farm on which we live is beautifully located six miles from a large town in one of the best dairying districts of the Delaware Valley. The buildings are large, modern and expensively built, with all the conveniences and equipment that is necessary in the business of running successfully a dairy farm. The stock was selected to yield the greatest profit, therefore, many thousands of dollars were invested, more than was covered by fire insurance and we always dreaded the time when lanterns had to be carried about by the men in the barn.

We could see a positive need of some good lighting system that would insure more safety, so we began looking about, visiting farms that were equipped with electric plants and studying the merits of different makes; finally deciding upon one that seemed to give entire satisfaction to those who were using it. After using this system of lighting, we believe we have the brightest and most beautiful light that can be secured both in the house and other buildings, and the pretty globes and chandeliers add much to the furnishing of our home.

Everybody knows that it is a comfort to work or read by a light that is equal to day light, and how much time and labor is saved in doing any work if we have a good light to work by. To produce light one has only to press a button, thus doing away with the daily drudgery of cleaning of lamps and lanterns.

But this is not the only convenience, the washing is easily done by adding a motor, and an electric flatiron and vacuum cleaner save much unpleasant work about the house. At the barn, a motor furnishes power for running the milking machine and other light work, thus giving us both light and power that is clean and safe.

We have noticed that it is easier to secure help since we put in electricity. The hired men enjoy their quarters which are well lighted and furnished with magazines, papers and games, as well as working in a place where it is possible to see what they are about. Therefore, I feel safe in saying that electricity has not only given us the greatest amount of beauty, comfort and convenience of anything added to our home, but has also given us more safety, contentment and happiness.—A. H. Woodburn, Walton, N. Y.

WEAR AND TEAR ON CAR

Most drivers and others who handle automobiles know, if they give the matter any thought, that whereever there are surfaces bearing against each other, there must be wear, this is inevitable. With good and sufficient lubrication much wear is saved on an automobile, but sooner or later it must occur. And it is plain to see and understand that all unnecessary work done by the car means just that much of its life thrown away, and every time a car is misused in a mechanical sense, something is made to wear faster than it should.

If the engine is speeded up and the clutch let in suddenly to get a quick start, which is the practice of many drivers—a heavy strain is sure to be brought upon every part of its mechanism. Start the car gradually and smothly and get it up to speed without undue haste. It is a much better way to make a start, more comfortable and much less expensive.

When the car is not in use the engine should be stopped, unless you intend to proceed further in a very few minutes, or unless, in cold weather it is necessary to keep it running to prevent the radiator from freezing. In all cases when standing the engine should be allowed to run slowly. It is a poor policy to cause unnecessary wear on vital parts of the car for the sake of saving the trouble of turning the crank. A little attention along these lines will bring good results.—M. C.

PENNSYLVANIA FARMER
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PHILADELPHIA, PA., NOVEMBER 20, 1920.
VOLUME 48
NUMBER 21

OUR JOB is to serve our readers. Whenever you are puzzled, write to us and we will help you if we can.
—The Editors.

Immigrants From Holland Coming

WE HAVE received information from the Employment Bureau of the Pennsylvania Department of Labor and Industry that a considerable number of immigrants from Holland are to land at New York within the next two or three weeks. The Bureau informs us that these immigrants are very desirable people for farm laborers and we would suggest to those who are interested in securing help of this kind that they communicate with K. M. Coolbaugh, Supt., 1519-21 Arch Street, Philadelphia. The telephone number is Spruce 3944. It is understood that immigrants, who are coming in three different ships, are composed of both married and single people so that it should be possible to secure help to suit almost any farm need.

Sportsmen?

WE HAVE several letters this fall, mostly from New York, in which complaint is made of damage done by careless or malicious gunners. In some instances stock has been shot while pasturing in fields under circumstances indicating that it was done intentionally. We believe that the vast majority of gunners are real sportsmen at heart, with all that the word implies, but if the privilege of gunning is to continue to have public approval, sportsmen and their organizations must help to bring the irresponsible and criminally-minded gunners to book or the public will rebel and stop the sport. Since it is possible to enforce the laws against shooting game out of season so well, it should be equally possible to put an end to setting fire to woods, shooting stock in fields, raiding orchards and damaging crops. Gunners who complain about the selfishness of farmers in posting their property against hunters have themselves as a class to blame.

Two Years of —- --

AS THIS is written bells are ringing, whistles are blowing and there is a general din and racket in commemoration of the signing of the armistice, which occurred two years ago at this hour. The sounds bring back vividly the feelings that filled the hearts of humanity upon that occasion when it was realized that the horrors of the previous four years were at an end, and every normal human being rejoiced in the prospects of peace again covering the earth as the waters cover the sea. Business everywhere was suspended in celebration, not of war but of peace. All day long the racket continued and every hour the throngs became denser.

But today's celebration has already ceased. It lasted barely fifteen minutes, and was feeble compared with that of two years ago. What is the reason? Is it because we forget? or is it because our anticipations of that day have not been realized? Possibly it is because, in our almost childish joy, we forgot the lesson of the ages which teaches that the human passions are not quickly subdued when once let loose by war; that the reaction brings other troubles almost equal to those of war. For a time the spirit of sacrifice is replaced by selfishness, generosity is changed to greed and patriotism is forgotten in partisanship. The last two years bear evidence to this and the "losses due to war" are not complete unless they include the value of lost human character and conduct, and the value of previous high standards and ideals. Let every one lend the same effort to clearing away the aftermath of war as was exerted to win the war and we will soon have peace in the fullest sense of the word.

Prizes For Articles

In the course of a year we receive a great many letters asking for information about farm and home machinery and equipment. We have found that the most satisfactory information of this kind is secured right from the users of these articles, and for that reason we make the following offer:

For the First Best article on any of the following subjects we will pay $10; for the second best, $7.50; for the third best, $5.

1. My Experience with the Milking Machine.
2. My Experience with a Tractor.
3. My Experience with a Truck.
4. What We Did or Added to Improve Our Home.

Articles on the first three subjects must contain facts and figures showing costs, and profit or loss.

All articles should be in our hands by December 25, 1920.

Write plainly and upon one side of the paper only.

The three prize articles on each subject will be published together. All articles not receiving a prize but which are accepted for later publication will be paid for when published. Those not accepted will be returned.

Articles should contain from 750 to 1200 words.

We reserve the right to refuse awarding first prize to any article should none seem worthy.

Address, Editor, Pennsylvania Farmer,
261 S. Third St., Philadelphia.

Poetry-Patriotism-Profit

APPEALS have always been made to the farmer by those who are interested in him and his business in an effort to induce him to stick to his job of feeding an ever hungry world. In former years professional and business men would call the farmer's attention to the poetic side of his life. His was the most favored of callings. Was he not awakened in the dewey morning by the singing of silver throated songsters? Was it not his unique privilege to sally forth with the shining milk pails to draw the snowy streams from the sweet-breathed kine; afterwards to eat a breakfast fit for a king, prepared by his singing wife; then to turn the cows to the dew-laden clover, and hie away with his prancing team to turn the steaming mold, surrounded by bowers of blossoming trees and breathing the honey-laden air? Thus did doctor, lawyer and preacher attempt to lull the disheartened farmer, and by word-pictures try to keep the boys and girls on the farm. But it did not work satisfactorily. In spite of all the POETRY the boys and girls and hired men, and in many cases the old folks, continue to leave their Edenic surroundings to enter other callings. Something was lacking.

The next appealing word used was PATRIOTISM. When the world went to war it appealed to the farmer to do his bit by producing an abundance of food. He was told that his work was as important and as honorable as that of the men in the trenches. He—or what was left of him—responded nobly and produced record-breaking crops. But the end of the war found proportionately fewer farms and fewer farmers than ever before. More than that, those who shouted patriotism, in many instances, lost interest in the farmer and turned to devising ways to fleece him.

Again the consuming world is anxious about its future food supply. It has learned that appeals to the poetic instinct and the impulse to be patriotic are not permanent in their effect. Something more seems to be needed to put the business of farming upon a basis which will insure a continuous supply of food for all. We have the land, the fertility, the transportation systems and sufficient people to farm yet left. We would suggest, as the next word to be adopted as a watchword by those who would spur agriculture, PROFIT. We will guarantee that if the public will express its interest in farming by this word, and act accordingly, it will not need to worry about enough to eat.

Let Us Reason Together

WE ARE FACING the most critical industrial situation which has confronted this nation since the war began. The next few weeks will decide whether we have sufficient good business sense to adapt ourselves to the changed conditions and go on with business, or whether we shall hold out for unfair and impossible terms and prices and thus bring about a paralysis in industry that will mean a panic. It is idle to talk of maintaining war prices in any line of production. The slump is already on and they who try to stop it are only increasing the danger of a general tie-up. The public has little sympathy with any class just now which refuses to bear its share of loss in this period of readjustment, and this applies equally to labor, manufacturer and farmer. Those who know the principles of Pennsylvania Farmer know that we fight consistently and persistently for better prices and greater profits for the farming industry, but we think we know what is reasonable and sensible.

What is really needed is a universal willingness to accept the unavoidable and necessary reductions in every line so that the mills, mines, factories and farms may go ahead with production and thus keep up the power to buy. If all will do this, there will be no general shut down with a consequent panic.

Our Washington Letter

Altho Congress will not convene for its winter session until early in December, the various executive departments are busily at work preparing estimates for appropriations for the next fiscal year, and the House Appropriations Committee will begin the hearings by the middle of this month.

Formerly the Agricultural Committee had charge of the appropriations for Agriculture, the Military Committee for the army appropriations, and so on; but a change was made in the rules last spring requiring that all appropriations measures be considered by the House Appropriations Committee.

Large increases will be demanded by several departments, but it is probable that only on account of absolute necessity will increased appropriations be granted for any object. Treasury reports show that government revenues from customs are increasing, but the latest figures indicate that this year's government revenues are falling below last year's receipts. In line with the necessity for economy, it is inevitable that the House Appropriations Committee will cut down estimates and it will be the work of the farm organization representatives to prevent if possible the crippling of any department activity that may be needed for the protection of agriculture, and also to protest against needless expenditures for non-essentials.

* * *

The wheat and cotton growers, despairing of getting financial relief from the Secretary of the Treasury or Federal Reserve Board, will turn their attention to Congress for relief. The farmer representatives will hold a series of conferences for the purpose of developing a definite legislative program. They will ask for amendments to the Federal Reserve act, providing for extension of credits, and it is expected that long drawn out hearings will be held before the Agricultural and Banking Committees on the proposed amendments.

* * *

It is confidently expected that the party soon coming into power will be very considerate of the farmers needs and demands. "The crux of the present agricultural condition lies in prices, labor and credit," says the Republican platform. This is interpreted as signifying that the party leaders in Congress will be favorable to measures which will give farmers better credit facilities. In its platform the dominant party says it believes in the right of agriculture to form co-operative associations for marketing their products and protection against discrimination," which is taken to indicate that the Capper-Volstead co-operative marketing bill will be acted upon favorably by Congress.

* * *

The statement that the party "believes in the authorization of associations for the extension of personal credits," is taken to mean that some kind of rural personal credit legislation will be enacted as soon as Congress can get down to business. The platform statement that "the Federal Farm Loan act should be so administered as to facilitate the acquisition of farm land by those desiring to become owners, and thus minimize the evils of farm tenantry, and to furnish long-time credits as farmers may need to finance adequately their larger and long-time production operations," also stimulates confidence that the Farm Loan system will be made more effective in aiding the farmers.

* * *

Tariff revision legislation will be taken up early in the coming session. The Committee on Ways and Means, of which Representative Joseph W. Fordney, of Michigan, is chairman, has been doing considerable work on the tariff during the summer vacation. A large volume has been prepared and just received from the printer, giving a comprehensive summary of tariff information, including the acts of 1909 and 1913.

* * *

It is evident that an attempt will be made when Congress meets to either do away with the Federal Farm Loan system or secure the enactment of amendments which will make its operation ineffective in meeting the long term credit needs of the farmers. The farm mortgage bankers, it is said, are backing this fight against the Farm Loan act. Their representatives are already in Washington preparing for the campaign. The first move will be made against the Joint Stock Land Banks. If successful in destroying this feature of the Farm Loan system the Federal Farm Loan associations will be proceeded against.

* * *

At a conference of farmer organization representatives, a few days ago, Judge Charles E. Lobdell, a member of the Federal Farm Loan Board, was quoted as being opposed to the Farm Loan Act. Dr. W. J. Spillman, formerly chief of the Bureau of Farm Management, stated that "Commissioner Lobdell told me he was not in favor of National Farm Loan associations." It was also charged that the board favored the Smoot bill to eliminate Joint Stock Land banks. The Farm Loan Board, it was asserted, would continue the twelve land banks, having them make loans direct thru agents of their own choosing.

* * *

The committee of seventeen is functioning finely, as representatives of different farm organizations with diverse ideas have gotten together on common ground, with great confidence that something of real worth will be accomplished in the development of a satisfactory marketing plan. There is no thought of impossibilities in their task, no manifestation of selfishness on the part of any one. The committee has adjourned to meet on December 13th. It has been voted to raise a fund of $50,000 for investigation in marketing and research work.

* * *

According to Mr. Howard, North Dakota is pushing to the front as a farm bureau state. Enough farm bureaus have been organized to start a state federation, and a drive was put on this week, which provides to put North Dakota nearer 100 per cent farm bureau membership than any other state. In Nebraska the Farm Bureau Federation and Farmers' Unions are making drives for membership, working harmoniously in the same counties, and their greatest gains are in sections where the Non-Partisan League is strongest. Reports indicate that ninety per cent of the farmers in Nebraska are joining the farm bureaus.—Elmer E. Reynolds.

HARRISBURG LETTER

Millions More for Schools.—The movement for a greatly increased educational appropriation by the Legislature of 1921 with substantial advances in the allowances for teachers' salaries, vocational training and aid for rural schools which are consolidating and striving for the best results took substantial form here a few days ago when the second gathering of state educators for discussion of educational problems talked of schools in a business way. The sentiment was so strong that virtually every state official appearing before the educators backed up the proposition of Governor William C. Sproul to make better schools the paramount policy of the next session. The Governor himself in the course of a short talk reiterated his position and declared educational appropriations should be considered "investments," not expenditures of government. As these are days when millions are discussed the opinion of educators here was that the State should devote from $40,000,000 to $50,000,000 of the $130,000,000 or so it will have to appropriate for a two-year period to education, insisting at the same time that counties and school districts establish a uniform system of valuation of properties for taxation. These were the primary results of the conference and there was general support for the Finnegan plan of salary advances for teachers and improvement of school buildings, while consolidated and vocational schools came in for favorable comment. The conference started off with some facts about the standing of Pennsylvania in an educational way that made ears red but the lessons were taken hold of in an earnest manner.

Taxation Methods.—While considerable has been heard lately about new subjects of taxation as a means of meeting the demands for education the truth is, a new taxation will be unpopular in the coming session. Plans for new taxes on manufacturing capital, coal, advertisements and various natural resources will hardly be much endorsed because they will all come back on the consumer in the end. The state has a couple of commissions studying taxation now and the members are more inclined toward stiffening up the collection agencies, state and local, securing equitable methods of assessment and ironing out the discrepancies in the inheritance tax law, one of the big money makers, rather than to imposting new taxes. The state revenue this year from corporations will break all records, being based upon business in the closing period of the war.

Favor Constitutional Convention.—Sentiment at the Capitol appears to favor recommendation of a new constitution, thru a convention to be authorized by the people, but elsewhere it is not so strong. The Constitutional Revision Commission has passed upon over 350 changes, of which 27 are regarded as vital and 75 as important. The sessions the last week were marked by considerable effort to return to old time forms and to adhere to the present document, but the people back of a convention hope to meet this situation by pointing out the number of vital amendments is more than the people would care to vote upon at once and that it would take three or four years to submit them, while a convention could draft a new constitution and submit it next November, if desirable.

Preparing the Budget.—Secretary of Agriculture Fred Rasmussen is at work on studies for his budget. While the law does not call his departmental appropriation a budget, the secretary makes one up and is working on a plan which will permit of original work during the next two years. The secretary is anxious to continue the investigations which have produced valuable data.

Women Getting Busy.—Word has come to the Capitol of two meetings proposed fr the next six weeks for women to discuss legislation and ways to make their influence felt. The first drive of the women will be to secure a real state "dry" law which will be as enforceable as the present liquor license law which can be invoked by any one. Women will also take a hand in regulation of employment, teachers' salary advance, mothers pension and general health and welfare work.

Peach Tree Inspection.—Proposals for a state inspection or survey of peach trees to stamp out the wave of "yellows" now sweeping over the state will be submitted to the Legislature. The data gathered by Dr. J. G. Sanders, of the Plant Industry bureau, showed eight per cent of 111,000 trees in 104 orchards in nine southern or eastern counties, affected by "yellows" and more suspected of the same disease.

Decrease of Farms.—The state checking up of the idle farms in connection with the Federal census is showing more farms without tenants this fall than last spring and the results of lack of labor are showing in smaller acreage of wheat sown being reported. The farm labor outlook is not regarded as very encouraging now even with pronounced industrial slackening and efforts being made to get foreign labor to take to the farm. However, it is expected to get some results in the winter. In some industrial centers there was talk of men returning to the farm when mills shut down, but it has not materialized.

NEW JERSEY NEWS

Farmers Make Showing.—That the State Council of County Boards of Agriculture have brought about many reforms and accomplishments, that, perhaps, are little known generally, is made perfectly plain by John H. Hankinson, former Mercer County Agricultural Board agent and now a member of the State Council. In discussing the work of the organization, Mr. Hankinson among other things said: "The formation of the State Council of County Boards of Agriculture in New Jersey on January 15, 1920, made it possible for New Jersey farmers and farm women to take an active part in the great national farm bureau movement. This movement came at a critical time for farmers in the Nation's history. It offered them a chance to protect their interests and to take a positive and an active share in cutting down the distance between producers and consumers. The pioneers, who, this year, contributed money and time towards starting the council, have now real cause for gratification in that a permanent state office has been established at 38 West State Street, Trenton, with Dr. Frank App in charge as executive secretary. It is along the line of this new program that the county board has joined the State Council, and, thru it, the American Farm Bureau Federation. All county boards but two, are now members of the State Council. Each county board put $25 and 25 cents for each of its members over 100 in the State treasury. In addition, many of the counties on October 1 sent amounts towards a special fund for starting the state office.

Very Large Crops.—The weather in New Jersey during the past month was very favorable for the marketing and maturing of all late crops, there being little damage from early frost except in cranberry bogs. Corn, wheat, oats, buckwheat, white potatoes, apples and pears are all declared to have been greater in production this year than last in the state, this season's corn and potato crops being the largest ever harvested in New Jersey. The production of grapes and cranberries was less in 1920 than in 1919, early frost damaging the latter considerably. The egg production in commercial plants was less during October than in November of this year.

Eggs Are Down.—Fresh eggs in various parts of the state have dropped a few cents per dozen. The retail price in this city is $1 per dozen, as against $1.08 two weeks ago. Fresh eggs are quoted at retail in Bridgeton and North Bergen at 85 cents per dozen. New Brunswick and Trenton storekeepers are paying farmers around 85 cents per dozen for eggs. As the new egg crop does not begin to come in until after February 1, it is difficult to see how prices are going to come down very much in this state previous to that time.

Membership Drive.—Dr. Frank App, of the State Agricultural College at New Brunswick, is operating from an office of the State Council of County Boards of Agriculture in Trenton in making a state-wide membership canvass in which he hopes to reach every farmer in New Jersey. Already, the county boards of agriculture have a total membership of 2200, but, it is believed, that this number will be boosted to 15,000. The membership drive is being led by twenty prominent farmers in the state, and will be conducted by counties with the asistance of the county agents and local committees.—Kelly, Trenton, Nov. 15.

NEW YORK LETTER

New York Man Wins Success.—H. C. McKenzie, of Walton, N. Y., working for the American Farm Bureau Federation, is credited with giving the Ralston-Nolan bill a fatal blow; the bill would have levied a tax of a billion dollars on the farm lands of the country, or a tax of one per cent on all sales of commodities. His arguments were presented to the taxation committee of the national industrial board and resulfed in his winning over many leading experts of the country. Without the splendid assistance of the Farm Bureau Organization, these results could not have been obtained.

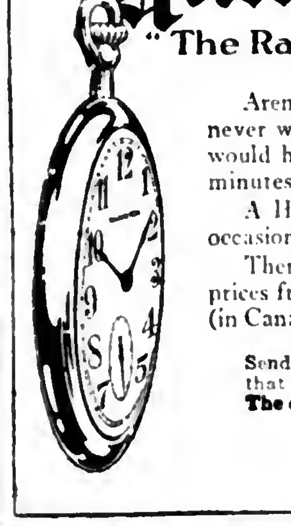
Poor Grading of Apples.—The fruit-growers' association received discouraging news concerning New York apples, which for a time were very popular in England, the demand having declined on account of poor grading. The carelessness of some shippers in packing apples, varying one inch, in the same package, has caused loss to all shippers, by decreased sales. Fruit growers of the state need discipline to see the policy of proper grading and packing.

Farm Bureau and Membership Drive.—There will be a drive for membership by all the Farm and Home Bureaus of the state, this week and next. The Home Bureau fee will remain the same, but some of the Farm Bureaus have a voluntary free, it being anywhere from $2 to $10, as the fees of each member must average $3.00—$1.00 of which is to support the State and National Federations. These federations have given the farmer a power never before known and should be generously supported.

Farm Winter Courses.—The winter short courses at the State College begin this week with a record enrollment, over five hundred students being enrolled until February, the heaviest enrollments being in the poultry classes. It is believed that poultry keeping is increasing in the state.

Junior Work Supported.—At a joint meeting of 250 of the Farm and Home Bureau officials of Cayuga County, local support of juniors project work in the county was urged. This county leads the east in honey production. Beekeepers are to receive special help in eradicating destructive disease that is rampant among bees.

Dairy Troubles Clearing Up.—With the majority of the liquid milk dealers accepting terms the milk industry looks a little better. The breeders associations are taking advantage of milk difficulties to urge the accredited herd plan. The use of the tuberculin test is a great benefit in itself to the industry, and results in a quick reduction of a milk surplus. The only drawback to its extension is the great scarcity of men qualified to give the test. The cheese market is still demoralized.


"On Time"

When your train roars in "on time," it means that every part of a great organization has worked with precision and fidelity to a schedule.

That is the sort of unfailing accuracy we have come to expect of railroad men. And that is what they, in turn, expect of the watches they carry.

The tremendous popularity of Hamilton Watches among railroad men is due to unfaltering accuracy and long life.

Regulations require that Conductor and Engineer compare time before the start of each run. That's what Engineer E. T. Reed and Conductor J. County, who together run the same Erie train, are shown doing. Both men carry Hamilton Watches, and both have a reputation for precise and punctual service.

Hamilton Watch
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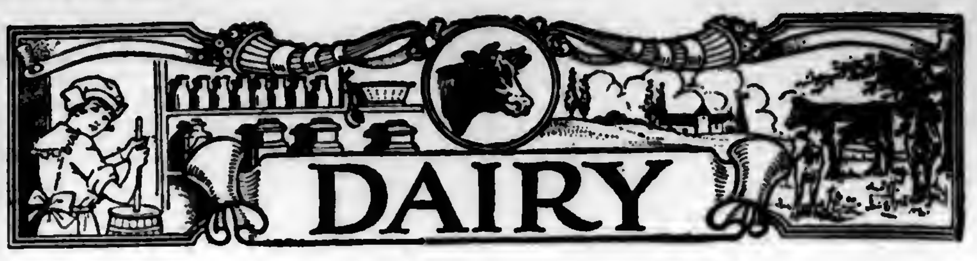

PENN STATE JUDGING TEAM AT NATIONAL DAIRY SHOW

By Prof. A. L. Beam, State College, Pa.

The Naitonal Dairy Show is rapidly outgrowing its name, for the name implies that exhibits come only from the various states of the Union, whereas, Canada, Argentina and Denmark had excellent exhibits of both cattle and dairy food products at Chicago during the week of October 10th to 16th. The realization of the ever increasing importance of the dairy industry and the belief that the scope of the present show should be international rather than national led to a step, the unlimited possibilities, of which it is impossible to estimate at the present time. At a banquet held at the Hotel Sherman October 11th, the American Dairy Science Association unanimously adopted a resolution to the effect that an International Dairy Congress should be held in connection with the National Dairy Show in 1922. This will mean the gathering together of the most noted international authorities of the dairy industry and should be a great aid in solving some of the perplexing questions confronting the men interested in dairying. Then, too, the present day dairyman can no longer ignore world wide competition, and a gathering such as this, will better acquaint him with the standards and methods that are necessary for him to be familiar with in order to compete on an equal basis with the several foreign countries which are at present selling dairy products in the open markets of the United States.

The rapid growth of the Intercollegiate Dairy Cattle Judging Contest will show the remarkable development that is being made in all departments of the Dairy Show. In 1919 fifteen teams entered the Dairy Cattle Judging Contest and this year twenty-one colleges from all sections of the United States were represented by judging teams.

Pennsylvania State College was last represented in this contest in 1916 and the creditable showing which the team made in both that contest and in the one held this year should afford sufficient incentive to have the college represented in all future contests.

The team composed of W. H. Davis, LeRoy Hoffer, C. E. Rubner and C. E. Mowrer, alternate, and accompanied by Professors Borland and Beam left State College October 6th and spent the following day at the Bell Farm, Coraopolis and the Blackburn Farm at Sewickley. The Bell herd of Holsteins is without a doubt the most remarkable herd of Holstein-Friesian cattle in the country from the breed type standpoint. The fact that in a herd of about 130 animals, only one was found with a sloping rump, will explain why this farm has so early established a reputation for its uniformity of breed type. Nor has the production side been overlooked, for at the head of the herd stands Echo King Sylvia, the youngest son of the wonderful milk producing cow May Echo Sylvia.

In order that the members of the team might become more thoroughly familiar with Holstein-Fresian breed type Mr. Bell personally conducted the party over the farm examining the groups of animals found in the different lots and pastures. Special interest was shown in the Junior and Senior herd sires. After this general examination Mr. Bell selected classes of cows, heifers and bulls, which all members of the party placed according to the standards of breed type and the knowledge here gained undoubtedly explains the excellent showing which the team made in the Holstein classes in the National Judging Contest. After a short visit at the Blackburn herd of Ayrshires the party left for Chicago and spent part of Friday looking over the Guernsey herd at the Pine Tree Farms, located at Hinsdale, a few miles from Chicago. The choicest animals, including the herd sire, King of Chilmark, had been sent in to the Dairy Show but sufficient good animals remained to afford interesting classes on which the team worked. This herd enjoys a well earned reputation for Guernsey type as evidence by the large number of judging teams which visited the farm prior to the show.

The contest commenced early Saturday morning with a class of Ayrshires and ended in the late afternoon with Holsteins. Then started an unsuccessful attempt by the men to figure out the standing of the teams but the dope was upset by the official announcement Sunday evening that only four teams out of the twenty-one in the contest had a higher score than Penn State.

Full information in regard to the individual scores in all breeds has not been received, however, Mr. Rubner, who was high man in the contest at the Eastern States Exposition, also did excellent work in giving the team its high average at Chicago. Mr. Davis received one of the three gold medals given by the National Dairy Show Association to three of the sixty-three contestants who had the highest average for all breeds. Mr. Hoffer was second high man on Holsteins and stands a very good chance of securing the $400 scholarship given by the Holstein-Friesian Association of America to the man ranking highest in the Holstein classes. The excellent work which each member did played an important part in ranking Penn State second in the Ayrshire class, seventh in Holsteins and fifth on all breeds.

The members of the team deserve much credit, as they made the trip to the Eastern States Exposition at their own expense in order to secure experience in the judging ring while the generosity of a few prominent Pennsylvania breeders made it possible for them to compete in the National Dairy Cattle Judging Contest at Chicago. From Monday to Friday the main attraction was the judging of the dairy cattle but much time was spent also in the various exhibits of both manufacturing and production equipment.

The Government exhibit dealing with the remarkable growth of the dairy community work at Grove City was of special interest as all were more or less familiar with the contrast between the conditions in that locality prior to 1914 and the state of affairs as they exist today.

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Monday noon, a Penn State luncheon was held at the Engineering Club where the team met a number of former State men among whom was a member of the class of '91, who gave an interesting talk on conditions at State during his undergraduate days. Tuesday a party of Penn State men visited Armour's Packing Plant and Libby, McNeil & Libby's. In the latter plant the hungry visitors were so interested in the samples of dried beef, crackers and pickles that the management feared the demand would exhaust the supply and ordered that all samples be removed until the visitors had completed their tour of inspection.

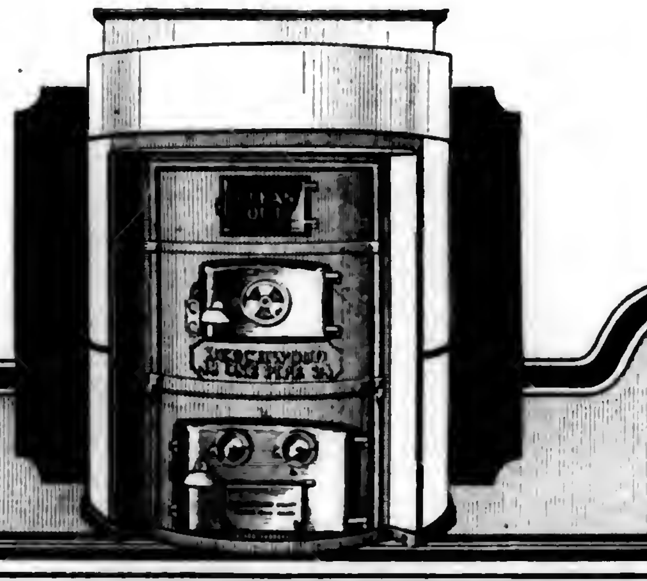
Owing to the short duration of the show one who has not visited it may fail to appreciate the varied and extensive exhibits which have been brought together at the end of a year of planning and preparation. Then again, he may also fail to recognize the magnitude of the dairy industry and the remarkable growth it has made and is still making. Approximately 1000 head of the Nation's finest dairy cattle were entered in the breed contests, which are object lessons in breed type for both the student and breeder. All have the opportunity to inspect the most improved labor saving machinery, dealing with the producing and manufacturing end of the dairy industry, as well as to study the various exhibits which deal with the importance of milk and dairy food products on the health of the Nation.

CO-OPERATIVE MILK PLANT IS SUCCESSFUL

With the assistance of the Dairy Division of the United States Department of Agriculture, the dairymen in Dubois, Pa., are conducting a co-operative milk distributing plant with decided success. As the owners are primarily producers and unfamiliar with the business of milk distribution, the Dairy Division keeps in touch with the work being done, and advises the stockholders in regard to the management of the business. Similar assistance is given to other organizations, whether co-operatively or privately owned, whenever requested.

The price which the farmers get for their product is determined by dividing the net receipts from sale of milk, after deduction for operating expenses and sinking fund, among the farmers in proportion to the amount and quality of milk they have respectively brought to the plant. Starting in July, 1917, with a business of only 800 quarts they are now handling over 2000 quarts daily, and have been paying remarkably good prices to the members. The enhanced profits were not the result of high charges to consumers, but of economies brought about by co-operation, such as reducing the number of delivery wagons. The co-operation of producers in one concern has also enabled them better to handle the problems of surplus and shortage of milk. The supply has been kept adequate to the demand; and at the same time the quality has been more uniformly satisfactory than formerly.

Since last February the price allowed for any particular milk has been based on its butter-fat content. All milk is expected to have at least 3.25 per cent of fat, and for this milk the minimum price is paid. For every one-tenth of 1 per cent of fat above the 3.25 there is an additional allowance of 4 cents per hundred weight.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FARM BUREAU NOTES

Chester County's Good Dairy Cows

Altho, as in every other business, conditions in our dairy industry are so unsettled as to cause uncertainty in the plans of our dairymen, the cow testing association is very effectively counteracting and stabilizing such conditions among their membership. The following reports indicate the performance of some of the better herds in the West Chester and Avondale-West Grove Associations during the month of October.

West Chester—Miss Myrtle Barger, tester, reports the following ten (10) best cows:

Owner.	Breed of cow.	Lbs. milk.	P.C. fat.	Lbs. but'r fat
Thomas D. Wood	Holstein	1938	2.9	56.2
Westtown School	Ayrshire	1246	4.4	54.
Westtown School	Ayrshire	1295	4.2	54.4
Morris Sellers	Gr. Jersey	1047	5.1	53.4
Westtown School	Gr. Holstein.	1519	3.5	53.2
E. Page Allinson	Gr. Guernsey	866	6.1	52.8
Robert F. Brinton	Holstein	1314	4.0	52.6
Robert F. Brinton	Holstein	1375	3.3	52.0
Westtown School	Ayrshire	1132	4.5	50
Westtown School	Gr. Holstein.	1321	3.8	50

Other dairymen having cows that produced over 40 lbs. butterfat during October—Frank A. Keen, Norman Frank, Highland Farm Dairy, Greystone Jersey Farms, Inc., Marshall L. Jones, George Forsythe, Howard Parker, Charles J. Garrett and Joseph L. Jamieson.

Avondale-West Grove—Thomas C. Y. Ford, tester, reports that a number of "loafer" cows have been disposed of as a result of the evidence held against them by the milk scales and Babcock butterfat test. This, along with the help the tester has been able to give along the lines of feeding, has been a real economic help to the herd owners.

The following is the list of owners of the best ten (10) cows along with the milk and butterfat records made:

Owner.	Breed. of cow.	Lbs Milk.	P.C. fat.	Lbs but'r fat
James Barrow	Dur.	1113	4.5	50
Hoagland Gates	Holstein	1107	4.5	49
Yeatman Brothers	Holstein	972	5.0	48
Hoagland Gates	Holstein	1275	3.7	47.2
R. Balderston	Guernsey	1046	4.4	46.
John Passmore	Holstein	1277	3.6	45.
D. W. Lynch	Holstein	1386	3.3	45
D. W. Lynch	Holstein	1198	3.8	45
Hoagland Gates	Holstein	988	4.6	45
Hoagland Gates	Holstein	857	4.6	44

Names of new members—John Passmore, Yeatman Brothers.

SCOURS IN CALVES

Indigestion or inflammation in the stomach is the common cause of scours in calves. If the calves are watched closely and treated at the first indication of scours, the cure will be much simpler. Always begin the treatment by cutting down the ration ,thus giving the calf a chance to rid itself of the irritating material.

In slight cases, after one or two feeding periods has passed, the calf will appear normal and full feeding can be gradually resumed. In more obstinate cases, however, it may be necessary to give a physic or 2 or 3 ounces of castor oil in a little milk Formalin, ½ ounce in 15½ ounces of water as a stock solution also is recommended. This should be given to the calf at the rate of a teaspoonful of the solution in each pint of milk feed.

But, since the "ounce of prevention" is all important, the following hints to calf feeders are suggested by dairy specialists at the New Jersey State Agriculturtla College.

1. Always have milk at the same temperature when feeding. Different temperatures will cause scours. The correct temperature is blood heat, or 98 degrees Fahrenheit.

2. Keep all feeding pails clean and sweet.

3. Do not overfeed. It will cause scours.

4. Keep calves in a bright, airy pen. Sunlight is essential to the growth of vigorous calves.

5. Always supply clean, fresh water.

6. Salt aids digestion. Keep it before the youngsters at all times

7. Pens should be warm but not hot and damp.

8. Do not crowd too many calves in one pen.

THE CRAWFORD COUNTY BULL ASSOCIATION

Feeling that readers of the Pen sylvania Farmer would be interest in the inception and development the Bull Assocation work in Cra ford County the following summa is submitted.

A county survey of Crawford Co ty, Pa., made in the spring of 19 revealed plenty of Holstein breedi However, no co-ordinated effort w being made to develop and impro this breeding along definite fam lines. Little testing was being do to determine the best cows and c sequently bulls purchased from the herds and used in the county g little promise of increasing the m production of their daughters.

Consequently during the followi summer enough interest was devel ed thru community meetings to w rant definite action tending towa a county organization.

On Saturday, October 25, 19 some fifty breeders met and org ized the Crawford County Holst Bull Association. This organizat included twenty-nine members a represented five breeding blocks. L. S. Brown was elected president Karl Willard, secretary-treasurer.

The basis for organization was teen dollars per cow with seve cows per block, which made it po ble for the association to purch these bulls at about one thous dollars each. The men placed th herds under the supervision of state for the eradication of tuberc osis under the accredited herd pl

A purchasing committee was pointed from among the directors accompanied by the County Ag it made a trip to Geoga County, O where five bulls were purchased.

The first four bulls were delivered into the county about February 20, 1920, the dams of the bulls purchased attaining a record of a thousand lbs. of butter in a year or its equal in breeding, and the sires of these bulls are among the best yearly record bulls of the Holstein breed. These sires are owned by the Pinery Farm, Mentor, O., and Karl Nims, East Orwell, O. The Pinery herd last year took more Holstein prize money than any other herd in Ohio. Three of the bulls purchased are sired by the Sensation bull, owned by Karl Nims, whose four nearest dams will average 1000 lbs. of butter, if the dams now on test continue at their present rate of production. Four others, purchased at the Pinery Farms, are sired by King Holigan Fayne Valdessa. This bull's dam had a record of 37.34 lbs. of butter in seven days, which was also a world's record in that class. The sire's dam is Valdessa Scott 2d, with 41.88 lbs. of butter in seven days. Two association bulls are sired by Hengerveld Butter Boy Hartog. His dam has a record of 33.3 lbs. of butter in seven days and in one year produced 1232.64 lbs. of butter. One of the association bulls is sired by Meadow Holm Combination, who is out of Ona Clothilde De Kol, the great foundation cow of the Ona family, which produced in 365 days 1100.61 lbs. of butter.

Since the organization of the association five more blocks have been organized, making a total of ten blocks in the association, for which bulls have already been purchased and their breeding discussed above.

As a result of the interest developed in the Bull Association, a party of thirty-eight men, members of the association, made a trip into Geoga County, Ohio, during the early part of August and purchased a carload of purebred cows and heifers, which will be foundation stock for their future herds. The breeding of these females was mainly along the lines of the breeding represented by the association bulls. The bull association has greatly stimulated the interest in the purebred Holstein industry thruout the entire county. The prospects are good for many more blocks.

At the first annual meeting of the Bull Association October 29, the secretary's report showed that the association now owns ten bulls valued at $10,000 and represents ten blocks embracing seventy-three members. Furthermore, two additional blocks will be added to the association in a short time. A sinking fund of over $1700 is on hand to replace the loss of any bulls or to promote the best interests of the association.

Upon a visit into Crawford County, Mr. Noel Wincher, Washington, D. C., in charge of Bull Association development in the United States, accompanied by R. R. Welch of the Penna. State College, pronounced the association one of the best of its kind in the United States.—C. .D Sprout, Meadville, Pa.

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Is there anyone who could furnish Charles K. P. of New Jersey, some Purple Fruited Ground Cherries, also known as the Green Gage Hush Tomato. If so, they would be doing him a great favor. Send in your information, and we will forward it to the inquirer.—Editors.

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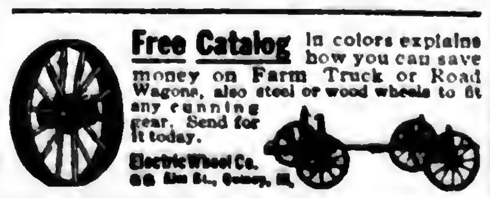

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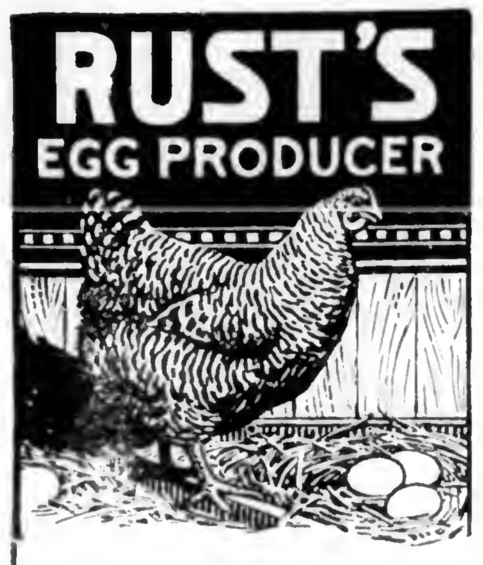

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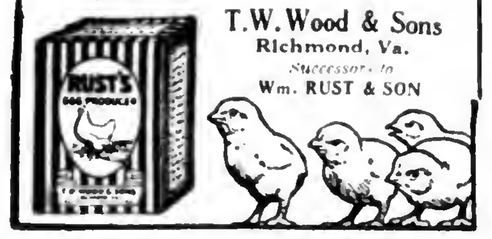

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Wintering Bees Outdoors

The beginner in beekeeping should winter his bees outdoors. Outdoor wintering has many advtanges and is easier than cellar wintering. The method to be used depends on the locality. In the southern states, bees will winter very well in single-walled hives, but as a rule, it is not wise to try to winter that way north of forty degrees latitude, altho frequently the bees come thru alright if they have a suitable windbreak. North of forty degrees, however, some protection should be given. The small producer can best provide this by using the double-walled packed hive. Some double-walled hives are made with no packing between the walls. These are very little better than single-walled hives. The packed hive, however, usually winter quite well. Another plan that does quite as well is to use a packing case for each hive. The case is set for a single-walled hive and the space between the walls of the hives and the case filled with packing material. The top is covered with packing material and the cover of the case set on. Dry goods boxes may be used instead of regular cases, but as they are so irregular in size and shape, they are not much used.

Another method is to place the hives in a row under a shed, the shed facing the south. Straw is packed around the hives. This method is not very satisfactory, as the bees lose considerable heat by having one side exposed.

The best way to winter bees outdoors is to use tenement hives. This method is used by many large producers and is very satisfactory. A tenement hive is a large winter case. It may hold two colonies, or it may be large enough to winter a dozen. The sides and ends are usually made in large cleated panels of cheap lumber. These panels may be held together by hooks and eyes or by screws, so that the tenement may be taken apart and the panes laid away when the bees are unpacked in the spring. The roof is also of cheap lumber covered with roofing paper.

The tenement hive is used principally in cold climates where double-walled hives are not enough protection. Cellar wintering is the usual method in such localities, but it has many disadvantages, and the tenement hive is being more generally used.

One of the best and simplest of tenements is the Bartlett. This case holds four ten framed colonies placed in contact with each other, two of the colonies facing one end and two the other. The floor of the case is raised from the ground about four inches, and the hives are raised from the floor about the same distance. The end panels are twenty-four inches high and forty-four inches long. The side panels are the same height and fifty-two inches long. They are held together and to the bottom by wood screws. The cover of the case has a gable roof and is supported by a cleat across each end. Two slots are cut across each end panel and these slots are connected with the openings of the hives in such a way that the packing does not interfere. When the colonies are packed in the case the space between them and the walls of the case is filled with packing material. Packing material is also poured on top and the cover of the case set on.

The bees should be placed in the tenements as soon as cold weather comes on and they need not be taken out until clover blooms. Supers may be put on before the bees are taken out from the case.

In wintering bees outdoors the importance of windbreaks can not be overestimated. Even if the bees are well housed in hives, if the location is in the open where the wind has a good sweep, many colonies are likely to perish.

Woods or bush make the best windbreak as the blast of wind filters thru, very little of it striking the hives. A group of farm buildings does almost as well.

High board fences are used as wind breaks to some extent but they are not as satisfactory as woods or brush, because the wind on striking the fence, glances upward, when it is caught by the blast above and forced downward, often striking the third or fourth row of hives from the fence. The rows close to the fence may winter very well, while those a little farther away often suffer heavily.

It is also important that bees form a good winter nest when wintered outdoors. A winter nest is a space of empty brood cells. The winter stores are placed around the nest, where the bees can get at them easily.

Often a beginner, on finding this space of empty cells, will insert a comb of honey in the center of the nest, thus dividing it into two clusters. Neither of these clusters will be as warm as if the two were together and if the winter is cold the colonies will suffer.

It is only fair to state that when bees are wintered outdoors they consume much more honey than when wintered indoors. The beekeeper should see that each of his colonies, after brood-rearing has almost ceased, has from twenty to thirty pounds of honey, depending on the strength of the colony. If the beginner will remember that a Langstrath frame full of honey weighs about 6 pounds, he ought to be able to estimate the amount of honey each colony has.

If the bees have not sufficient stores, they should be fed, preferably on granulated sugar syrup, until they have enough. This feeding must be done before cold weather.

If the beekeeper has been carless and his bees have not sufficient stores when cold weather comes on they should be fed hard candy.

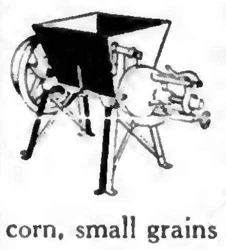
It is important that any honey dew be removed, because if left in the hive it is liable to cause dysentery, and a loss of bees will result.—Geo. W. Price, East Tawas, Mich.

TO KILL LICE ON POULTRY

A satisfactory home-made mixture to kill lice on poultry consists of 3 parts of gasoline and one part of crude carbolic acid with as much plaster of Paris as the liquids will moisten. The material is allowed to dry a few hours and then placed in air tight containers. The powder should not be mixed nor placed near a flame. It is necessary to hold the fowl while dusting in order to work the dust into the feathers thoroughly. Ten pounds of the mixture will treat 250 mature birds.

Mercurial ointment or "blue butter" has been found valuable for killing head lice frequently found on little chicks. Mercurial ointment is a stiff substance and should be mixed with one or two parts vaseline to apply it easily. A bit of the mixture the size of a pea applied with the tip of the finger and rubbed into the feathers about the head will destroy lice

Peerless Feed Mill



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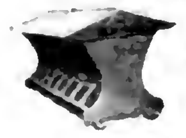

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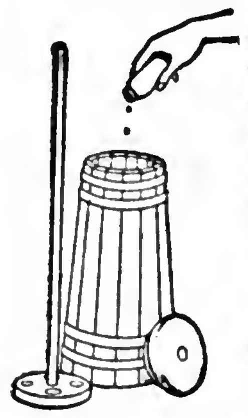

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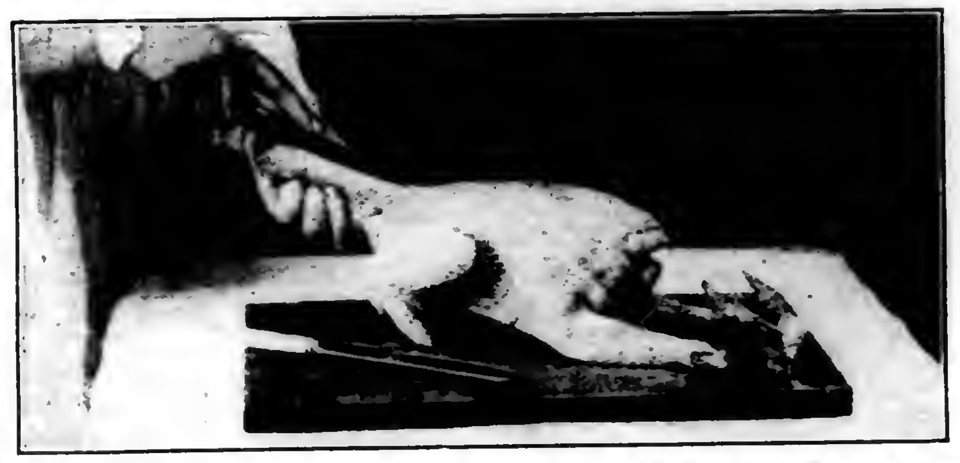
DOING THE THANKSGIVING FOWL

How to Make a Neat Job

Every housewife wants to have her Thanksgiving fowl brown nicely on the breast and all over without burning the leg knuckles. Following are some suggestions for avoiding the latter difficulty:

Trussing the Fowl

After the bird is properly drawn and singed and cleaned by scraping and washing thru two cold waters, the last one having a spoonful of salt dissolved in it, prepare the bird thus:



Slit the Skin at Back of Neck Instead of at Breast Front to Remove the Crop, etc.

To Remove Tendons.—The drumsticks will be tenderer if the tendons are taken out. To do this cut the skin of each leg a few inches below the joint, break the bone at this point by pressing it over the edge of the table, then pull out the tendons by pulling on the foot. Or you can shut a door on the fowl's foot or put your own foot on it, and pull on the fowl. The tendons will come out without much pulling if the fowl is fairly tender. By thus leaving a couple of inches of bone below the leg joint you have the knuckle bone covered with skin during the roasting, and thus make it look better. You can cut off the leg at the joint when the fowl is done.

However, it is not necessary to do this if a fowl is trussed so the the knuckles are kept under the bird during the roasting. And it is not usually done when the bird is tender enough not to have the drumstick tendons prove tough eating when done.

To have the breast of a fowl look neat one should not cut the skin at the front part of the breast to draw out the windpipe and the crop, as is usually done when we dress a chicken for cutting up for a pot roast or a fricassee. Instead slit the skin on the back of the neck, as shown in Fig. 1 on this page, unjoint the cut off the neck at the base, and draw out the windpipe and gullet and crop. Thus the crop cavity can be stuffed and you will have no slit to sew up to hold the stuffing in, for you will bring the neck skin back onto the fowl's back, and sew it down to fasten it there under the wing tips when they are folded across the fowl's back as in Fig. 2. Fasten the wings down by tying the tips securely under the bird's back.

To truss the legs, tuck the drumstick ends under the thighs, and tie down the same as you did for the wing tips. If the tendons have been drawn out, as explained previously, the legs will stay in place with little typing, but one can make them stay pretty well by tying down securely if the tendons are not out. If you pass the tie string over the breast of the fowl, you will have to be careful when you remove it not to break the breast skin and thus spoil the pretty appearance of the roasted fowl. The limbs stay close to the fowl best when the tie strings are wound around the body.

This leaves only the vent slit to be sewed up when the stuffing is in. Following are some suggestions for dressing the Thanksgiving fowls.—Harriet Mason.

Sage and Onion Stuffing for Turkey

Peel 4 large oranges and simmer 5 minutes in salted water, and just as the onions are taken out put in 10 sage leaves for a minute or two to take off a bit of their strong taste. Then chop the onions and sage together until very fine, add 1 cup of breadcrumbs, 2 tablespoons butter, and salt and pepper to taste. Toss together and mix in finally the yolk of one egg. You can also add, if desired, the liver very finely chopped after simmering a few minutes.

Braised Goose With Celery

Truss the goose as for ordinary roasting, then place it on a bed of vegetables in a roasting pan. The vegetable bed may consist of carrots, turnips, onions and celery seasoned with bay leaf and a blade of mace and thin slices of bacon, also salt and pepper to suit taste. Put in the oven with 2 tablespoons of butter spread on the goose. Cook carefully first in a hot oven, basting with water quite often, to brown the skin of the goose. When nearly done take up the goose, and cut into neat joints. Have ready ½ cup brown sauce, and add to it ¾ cup grape juice and 1 teaspoon red currant jelly. Put the pieces of goose in this and cook gently until thoroly tender. Meanwhile prepare a celery sauce thus: Chop fine the washed stalks of a small bunch of celery and fry them in 2 tablespoons butter for 5 minutes, then stir in 1 tablespoon flour; cook 8 minutes, stirring to keep the flour from lumping, then add 1½ cups white stock, and stir while cooking. Rub thru a sieve, reheat and serve with the goose.

This Fowl is Trussed Ready for Roasting

Peanut Stuffing for Chicken

Crumble 1 loaf of stale bread, and season with salt and paprika and a small quantity of powdered seasoning herbs, 3 drops of onion juice and 1 teaspoon chopped parsley. Add 1 cup roasted peanuts skinned and ground, and 1 tablespoon melted butter. Moisten a bit with thin cream, and stuff into the chicken two hours before roasting.

Thanksgiving Baked Ham

Soak the ham 12 hours, and scrape it very clean. Make a firm paste of ¾-lb. flour and some water, and roll it into a sheet large enough to cover all the ham; wrap the ham in this, wetting the edges of the paste to make them stick together. Put in a roasting pan and roast three hours. When done the paste will be very brown and hard. Crack it off, and skin the ham, cover it with browned breadcrumbs and serve with cranberry jelly.—Helen Lyman.

THANKSGIVING PIES

Mince.—Four bowls cropped apples, 2 bowls chopped meat previously cooked, 2 cups light brown sugar, 1 cup molasses, ½ cup suet or butter if you think you can afford it, 3 lb. stoned raisins, 1½ lb. dried currants, 1 nutmeg grated, ½ lb. citron, sliced or cut fine, 1 teaspoon salt, 1 tablespoon ground cloves, 1 tablespoon cinnamon, and about 3 quarts cider. Cook slowly 3 hours. Make a crust that will be flaky, brown and tender when done.

Pumpkin.—Line a pie tin with puff pastry, made by spreading the rolled out dough with butter, then folding over and rolling out again, repeating several times to make a flaky crust. Puff pastry is best made entirely of good butter. Mix 2 cups of sieved cooked pumpkin with 2 teaspoons butter, ½ teaspoon salt, 1 cup sugar, ¼ teaspoon each of powdered cinnamon, cloves, mace, allspice and ginger, the grated rind of 1 lemon, ½ pint milk ½ pint cream and two well-beaten eggs. Pour into the crust, and bake until firm in a moderate oven.—Helen Lyman.

VEGETABLES FOR THANKS

Stuffed Celery

Cook a medium-size cauliflower in boiling, salted water until nearly done, drain it and lay it in a buttered baking dish, and remove the stalk. Put 4 tablespoons breadcrumbs into a basin, chop 2 mushrooms and 1 teaspoonful of capers, and add 3 tablespoons grated cheese, season with salt and pepper, mix and put this stuffing into the cavity of the cauliflower made by removing the stalk. Press the cauliflower into as compact a shape as possible, cover with white sauce (ordinary white gravy made with butter, flour and milk), sprinkle grated cheese over the top, and bake 20 minutes.

Braised Onions

Put some peeled onions in a saucepan with enough cold water to cover, cook until partly done, drain well and put into the pan with 3 tablespoons butter, 1 sliced carrot, 1 diced turnip, a sliced stalk of celery, some seasoning herb, and 4 whole peppers. Cover with a buttered paper and the lid of the pan, and cook 20 minutes. Then add 1 cup of good meat stock and let the vegetables braise in the oven for an hour or more, adding more stock as the vegetables absorb it. Dish the onions neatly when done, and garnish on top with chopped parsley. Mix 2 tablespoons into the other vegetables, let cook up and serve around the onions.

Carrot Souffle

Boil some young carrots in meat stock until tender, rub thru a sieve. Blend in a saucepan over the fire 2 tablespoons butter with 2 tablespoons flour, and add the carrot pulp. Let come to a boil, season to taste with salt and pepper, add 3 egg yolks, and lastly mix in the whites of the eggs. Turn into a buttered bakepan and bake 30 minutes.

Parsnip Fritters

Cut some cold cooked parsnips into small pieces. Sprinkle with salt, pepper and paprika, dip into fritter batter and fry in deep fat. Drain and serve hot with a syrup. To make the batter: Beat 1 egg, add ½ cup milk, a pinch of salt, 1 tablespoon salad oil, and 1 cup sifted flour. Mix until very smooth and glossy. Let stand in a cool place an hour, then add 1 teaspoon baking powder, and use.

Creamed Turnips

Boil 3 cups diced turnip in salted water until done, and serve with the following sauce: Put 2 tablespoons butter in a saucepan, stir until melted, then add 2 tablespoons flour mixed with ¼ teaspoon salt and pepper to suit taste, stirring until smooth and glossy.—Helen Lyman.

HOW TO MAKE GREEN TOMATO CATSUP

Slice and salt the green tomatoes, and let stand 36 hours. Rinse if the tomatoes taste too salty, and drain well. (It is a good plan to let them stand in an enamelware colander during the time that they are soaking in the salt, then they will drain themselves). To 4 quarts of the tomatoes allow 3 quarts of cabbage, 2 quarts of apples, and 1½ quarts of onions. Chop all fine. Allow vinegar enough to cover, sweeten it to suit your taste. For each 8 quarts of the tomatoes and cabbage and onion allow a 5-cent box of mixed spices, and grind them, then add them to the vinegar, boil it up, and pour it onto the vegetables. Stir well and let stand 24 hours, stirring occasionally, then seal up.—Mrs. F. W. Stillman, Union Co., N. J.

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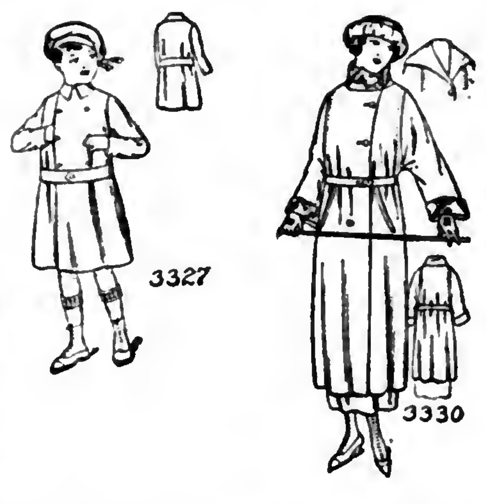
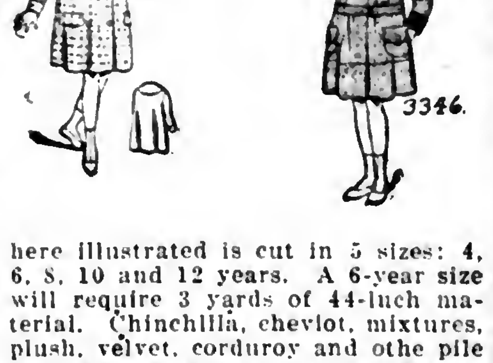
3327.—Boy's Overcoat.—The pattern is shown in this illustration. It is cut in 5 sizes: 6, 8, 10, 12 and 14 years. A 12-year size will require 4½ yards of 40-inch material. Cheviot, tweed, broadcloth, velours, chinchilla, mixtures and serge are good materials for this style. Pattern, 10 cents.



3330.—Coat for Lady.—The pattern is cut in 4 sizes: Small, 32-34; Medium, 36-38; Large, 40-42; Extra Large, 44-46 inches bust measure. A medium size will require 4½ yards of 48-inch material. Evora cloth, polo cloth, duvetyn, pile fabrics and mixtures are suitable. Pattern, 10 cents.

3338.—A Popular Coat.—This pattern is cut in 5 sizes: 4, 6, 8, 10 and 12 years. A 10-year size will require 3¾ yards of 44-inch materia. Cheviot, tweed, heather mixtures, polo cloth, velours and mixtures are good materials. Pattern, 10 cents.

3346.—Girl's Coat.—The pattern here illustrated is cut in 5 sizes: 4, 6, 8, 10 and 12 years. A 6-year size will require 3 yards of 44-inch material. Chinchilla, cheviot, mixtures, plush, velvet, corduroy and othe pile fabrics may be used for this design. The facing may be omitted or it may be of contrasting material. Pattern, 10 cents.



HOMESPUN YARN

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Beat the Coal Shortage with the Ottawa Log Saw and make big money. Cut your entire winter's fuel supply quick, then make big profits sawing wood for others and selling wood in nearby towns. Provides cheapest and most plentiful fuel at a cost of about 1½c a cord. Do the work of 10 to 15 able-bodied men at one-tenth the cost with the

OTTAWA LOG SAW

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Pulls Over 4 H. P. Makes 310 saw cuts a minute. Direct gear drives saw—no chains to tighten; no keys; no set screws. 4-cycle Frost Proof Engine with counter balanced crank shaft. Oscillating Magneto Ignition, no batteries ever needed, and Automatic Governor with Speed Regulator. Uses little fuel. Easy to operate. As easily moved by one man as wheelbarrow. When not sawing, engine runs pumps, feed grinders, etc.

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Cash or Easy Terms. Get our payment plans of purchase and find out how easy it is to own an OTTAWA Log Saw. It will soon pay for itself. Any man with logs to cut can not afford to be without this Log Saw, and he can soon own it under our wonderful selling plan.

Special Offer Write at once for Special Offer and Low Direct Factory Price; also Free Book, fully illustrated, showing how thousands of Ottawa users have paid for their log saws in a few weeks. Don't delay. It costs nothing to investigate. Just send your name and address on a postal card for complete information and special introductory offer.

OTTAWA MANUFACTURING CO.
2563 Wood Street Ottawa, Kansas

HUNTING SEASON

With October first arrived the hunters, or "Sportsmen" (as they prefer to be called) and their annual trespassing on the farmers' domains. As many of these "sportsmen" care not a rap how they destroy the farmers' crops, let his fences down or gates open for the stock to stray where they may, breaking and virtually destroying the fences, their dogs chasing the stock, fowl, etc., so that many of us are not effusive in our greetings to them, as we have suffered too much and too long from their depredations.

Has the farmer, whether owner or tenant, no right whatever over his land, that his own money and labor paid for, and who pays the taxes thereon? Would it not be more just and more honorable to have a law which gave the farmer the privilege of allowing or not allowing the public to traverse his premises? Just reverse this case; let the farmer go to the city or the premises of the "sportsmen," pillage his store of merchandise, upset and kick everything around generally, fill their pockets with everything they see and want, and if—there should happen to be a pet (cat or dog or any other animal) why, just "plug him one," and—see what happens. Police summoned immediately! Why discriminate in this case? It is going on all the time under the guise of a "hunter's license."

Turn about is fair play so if this condition is to continue, License the Farmer, let him go to the city and turn things "topsy-turvy," as the city people do to the farmer and see if they really do believe in the Golden Rule, "Do unto others, etc." Somehow the picture would look different, but is it?—M. I. C. A., New York.

MONEY "ON CALL"

We note in your issue of October 30, editorial on "Banking Accommodations." We believe that this editorial is misleading, for a very thoro investigation conducted not only by the Comptroller of the Currency, but by a number of financial experts and economists demonstrated no longer than last summer that very few country banks sent money to New York to be loaned on call. Some of the secondary reserve cities send money there to be loaned on call for the reason that the law requires a certain amount of money or reserve to be held. The call loans can be held as a secondary reserve and no bank wishes to be loaned up clear to the legal limit without having a reasonable amount of convertible loans and investments which can be realized upon promptly in case their customers withdraw some of the deposits.

Speaking for Western Pennsylvania, we can say without fear of dispute, that there is practically no money loaned on call in the cities, and that every farmer who is worthy of credit has been able to secure banking accommodations, and in every case at 6 per cent., while the going rate for money is 8 per cent. If the banks had advanced interest rates in proportion to the price of farm produce the rate most certainly would have been much higher than it was.

The Grove City National Bank mentioned in your editorial has done a great deal in the way of encouraging purebred live stock. We have also been honored by co-operation with the Crawford County Farm Bureau, and we will take pleasure in mailing to you shortly our monthly publication which gives a little review of the bull association formed by the Farm Bureau with the co-operation of our expert. We enclose herewith a copy of our publication as of December, 1919, which also gives some information on what we have been doing.

We have too high a regard for the Pennsylvania Farmer and its editorial opinions to believe that they would lend themselves to any statement against which there might be a doubt of its truthfulness. How they gained the impression that appears in this editorial we do not know, but there have been so many radical, rabid, socialistic, so-called reformers and fault-finders during the last few years, that the best of men are apt to be misled in some things. The banker who cannot see that it is to his best interests to take care of his home people is not a banker, and his success will be short-lived.

With kindest regards, and wishes for your continued success, I remain,

Yours very truly,

E. W. McGILL,
President Crawford Co. Trust Co.

CHAMPIONS THE SCHOOLS

Having read E. M. A.'s article on rural schools in the Pennsylvania Farmer for Nov. 6th, I should like to say a word on the subject. I, too, am a rural teacher in New York state, and have taught two more terms than Mrs. A.

The physical training law has interested me vitally ever since it was passed. Many of us thought the setting-up drills would interrupt our work; but on giving the plan a fair trial, I concluded it helped the routine work more than it hindered. As country school children must have long study periods and short recitation periods in order to cover the day's program, they do get tired of sitting still. When work gets dull and mischief invites, a two-minute period of brisk exercise puts new life into study and arrests the wandering attention. As one little girl confided to me, it "waked her up" (figuratively speaking, you understand).

If we could only have open-air schools the year round, we should have no trouble about ventilation—or if the wind blew a gale thru the building continually.

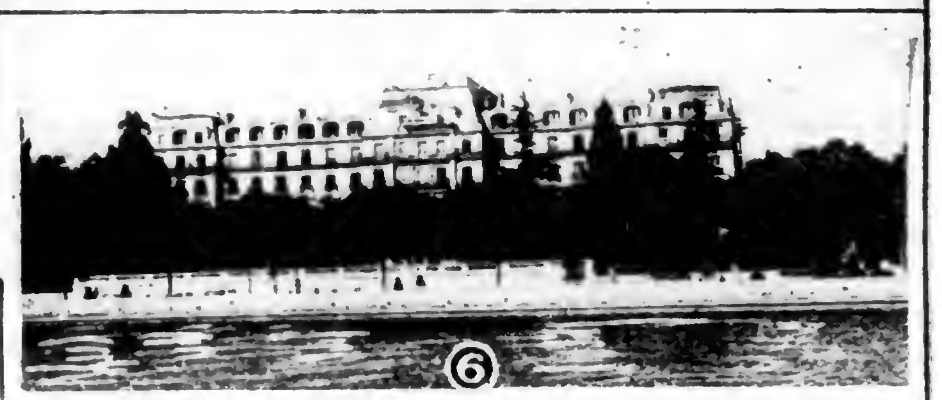
However, I have found that a little country schoolroom smells close and stuffy if it is kept shut up for an entire session, and, consequently, that the opening of the windows for a short interval is an important part of the plan.

What teacher has not heard that old argument about the children getting exercise enough at home? Apparently folks think the state department calls eight minutes a day a sufficient amount of exercise. Not at all. As I understand it, these periods of setting-up drills are to help the posture of the growing child, to teach control of the parts of his body, to develop breathing capacity and, in short, to direct his physical development.

According to the reports of physical examination at the time of the draft, country children have not been trained physically in the past as they should have been. You know they tell us that young men from the country were, as a class, physically inferior to those in cities. Let us uphold any regulation that tries to make the citizens of tomorrow physically fit—whether for war or for peace.

In conclusion, what does Mrs. A. mean by a "better job?" She says that teaching school fifteen years ago was a better job than it is today. Will she please explain?—V. M. B.

PASSING EVENTS IN PICTURES



([illegible] copyright by Underwood & [illegible])

1—This Photograph shows a Japanese carpenter sawing a log.

2—Washington Woman receives Famous Claymore Sword, said to be the most famous and historical sword of Great Britain.

3—Medicines for all ills are offered by this woman at Darjeeling, India.

4—Dining Room aboard the President's Yacht, U. S. S. Mayflower.

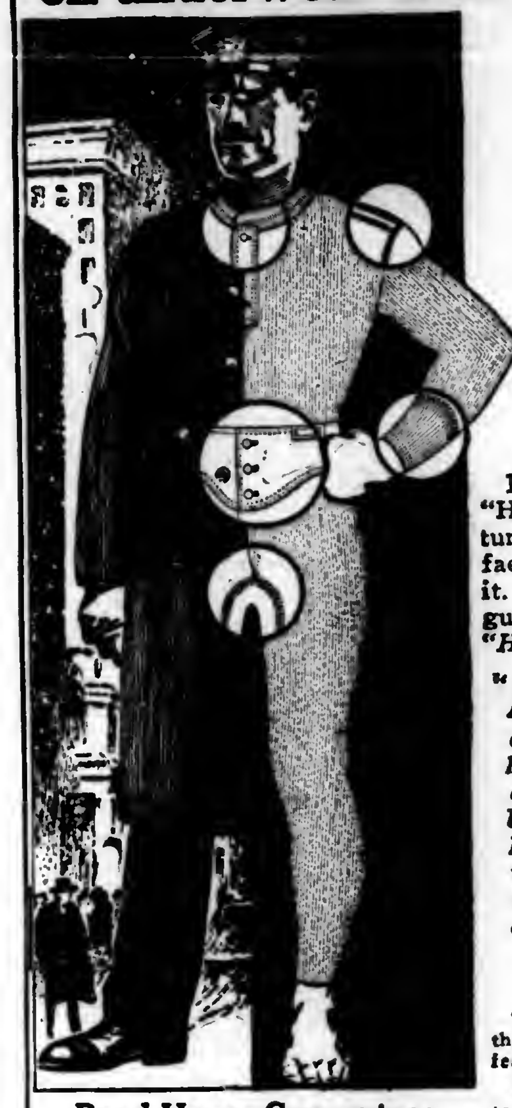
5—Steel span across the Potomac at Washington floating into place by the tide.

6—Geneva Home of the League of Nations.

7—Cloth Hall, Ypres, with its commanding [illegible] preserved as a remembrance of the Great War.

8—Pretty English girls enjoy the surf late in fall.

9—The Towers of Lower New York viewed from the sky.



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HORSE COST LESS THAN COMMONLY SUPPOSED

In the exact cost accounting studies carried out by the Bureau of Farm Management of the University of Illinois, covering a period of five years, work horses required annually but 25.3 bushels of corn, 37.8 bushels of oats, 1.7 tons hay and 170 days access to pasture, at 1.96 acres of pasture per horse. This is an allowance of 2626.4 pounds of grain, 3400 pounds of hay and 1.96 acres of pasture per year for each working horse. The horses observed were working regularly on Illinois farms under usual farm conditions.

With these figures as a guide, it is not difficult to compute the cost per horse per year. Manure produced by horses and colts is valuable to the farmer and offsets feeding costs at present grain prices to the extent of approximately $39 per year for a drafter and $30 per year for a draft colt. This is placing its worth at $3 per ton. At present, figuring corn at 90c, oats at 60c, hay at $25 per ton and $15 per acre for pasture rent, the total board bill for a working horse comes to $117.35 per year. The farmer substracts from this the value of fertilizer contributed, $39, leaving but $78.35 expense for a year's feeding.

These exact figures explode the high cost of feeding theory. The recent drop in hay and grain prices is also an economy argument for city users of draft and wagon horses. Nor has it disturbed the balance between cost of production and income on farms where horses and mules are used, for with the decline of feeding stuffs, the cost of maintaining farm power likewise drops.

FATTENING SURPLUS STOCK

In these days when it is desirable to dispose of cows which do not prove their worth in the dairy, it is not always easy to get what they are really worth from the local meat man. So many such cows are being offered that the price has been forced down beyond all reason, so that there is a temptation not to try to get rid of them at all but carry them over till spring, as we have been doing, to our loss in the past. But is there not a better way than that?

It is a fact that a great deal of meat is bought by farmer folks for use in the home, and almost always the price asked is all out of proportion to that which dealers are willing to pay. Somewhere between the farm and the meat market a most remarkable increase in values takes place. If one will just watch his bills for meat bought in this way he will be surprised at the amount that will be spent in a little while. And here is our suggestion.

The cow which does not come up to the standard in her dairy work, and which we surely ought to dispose of, may be fattened and used at home, saving a large amount for that kind of food and giving us the choicest kind of beef. There are usually a good many things on the farm that can be turned toward the fattening of such an animal. We have small potatoes, some nubbins of corn, apples that have commenced to decay or those which are termed "cider apples." In some pastures trees are found that bear many bushels of this kind of fruit.

A good deal more may be realized in this way for surplus cows than could be in the ordinary way of selling for whatever may be offered.—E. L. V.

VALUE OF SKIM MILK

Farmers who are wondering what is the feeding value of skim milk, will be interested in the rules which are approved by the animal husbandry men at the State College of Agriculture at Ithaca. One rule, known as Gurler's, is that a hundred pounds of skim milk are worth, for making pork, one-half the price of a bushel of corn.

Hoards' rule, however, is better, think the college workers; it is: When fed alone, the value of a hundred pounds of skim milk equals the market price of live hogs, in cents per pound, multiplied by five. If fed in combination with corn or barley, it is worth the price multiplied by six instead of by five.

The following example shows how the rule works: If hogs are worth 14 cents a pound, a hundred pounds of skim milk would be worth for feeding fourteen cents times five, or seventy cents, if fed alone. If fed with corn or barley, as it usually is, it would be worth eighty-four cents.

A limited amount of skim milk for feeding small pigs or brood sows is worth much more to the hundred pounds.

The larger the percentage that milk makes of the total feed, and the older the hogs, the less the milk is worth. The above rule is for pork production in general.

Herbert Mengle, an Agent of Pennsylvania Farmer in Schuylkill Co., Pa.

Three reasons why you'll like the new "U. S." Walrus

1—Can be cleaned instantly
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NO more dirty, mud-clogged overshoes! Here's an overshoe that you can *clean instantly*—no matter how dirty it is! Dash a pail of water over it—or hold it right under a faucet—and every trace of mud washes quickly off its smooth rubber surface.

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Ask your dealer to show you the new U. S. Walrus. Look over the rest of his U. S. line—boots, bootees, arctics—whatever you need. Every one is backed by over half a century of experience. The rubber comes from our own plantations—the whole process of manufacture is supervised by experts.

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Look for this seal US on all "U.S." Footwear

Prisoners of War

By HOPE DARING

In Two Parts—Part One

At last the long, self-congratulatory benediction came to an end, and the little congregation in the Leonard schoolhouse was dismissed. According to tradition the men were seated on one side of the house, and the women on the other. Minnie Holt hurried across the room to lay an eager hand on her husband's arm.

"Samuel, you'll ask Elder Potter home to dinner with us?"

Samuel Holt's ruddy, smoothly-shaven face flushed. "I reckon not today, Minnie."

"Why?"

The single word bristled with a sound of antagonism that was new between the husband and wife. The man looked confused, but he held his ground.

"I said no."

Then the unexpected happened. Minnie compressed her lips, and from her cheeks the faint color faded. "Well, then I shall. The house is mine."

Without a word Samuel Holt turned and strode out of the schoolhouse. His home was not far away. Indeed the schoolhouse was built upon a part of the farm which Minnie Leonard Holt had inherited from her father.

"I might a knowed it would turn out this way," Samuel thought as he walked along, the soft air of the October morning caressing his face. "I ought to have knowed better than to have married Minnie, even if I did think my eyes of her; it's agin nature for the property to belong to the woman. 'The house is mine,' she said. We've been married nine year, and Minnie never twitted me with that afore. It's all that whinin', rantin' Potter. I wish he'd never come into the valley."

The Holts lived in a sheltered, fertile valley among the Cumberland mountains. There was no church nearer than Huntsville, seven miles away. So, when, a fortnight before, Aaron Potter had appeared, asking permission to preach evenings and Sundays in the schoolhouse, he had been welcomed cordially. It was not that the valley folk were particularly religious, but life there was monotonous. The people, and especially the women, were glad of opportunities to come together.

Aaron Potter had surprised them all. It was a strange doctrine that he propounded in doubtful English but in words of four syllables. Potter preached a gospel of fear, of quick and severe judgments, and of tearful punishments. He declared the end of the world was, according to prophecy, near at hand. These statements were embellished with liberal quotations, not always correctly given, from the Bible. They carried weight with his hearers, because of their origin. The fact that the quotation seldom bore out the truth of the statement made was unobserved.

An hour after the service closed the Holts and their guest sat down to dinner. It was a bountiful meal; Black Lizy had spent much of the forenoon over it. Aaron Potter did not enforce upon himself the diet regulations so often recommended by the church which he claimed to represent; he ate heartily of the fried chicken, boiled ham, sweet potatoes, corn bread, biscuits, and grape pie. As he ate he talked, often with his mouth full.

"It is near—the day of doom for the unregenerate," he announced.

Samuel frowned. Thus far he had paid little attention to Potter's doctrine. Often the young farmer dozed thru much of the sermon. At other times he planned his farm work with satisfaction. It was the thought of his wife's interest in Potter that prompted Samuel to ask. 'How do you know?"

The tone was mutinous. Minnie dropped her fork. Potter frowned but answered promptly:

"I know, Brother Holt, because it is given unto me to interpret the Word of God. 'The sixteenth day of the tenth month.' That may be mighty near at hand."

Samuel laughed. "I don't seem to remember them words. This is the tenth month all right, but I 'sposed in Bible days they counted time different."

Potter at once began a lengthy harangue into which he introduced many of his so-called quotations. After a black look at her husband Mrs. Holt pushed back her plate. With her slender hands clasped on the table before her she sat, her eyes fixed upon the speaker's sallow, emaciated face.

Samuel moved uneasily in his chair. What did Minnie see in the fellow? He watched the color come and go in her cheeks. Her dark-lashed gray eyes, which her husband had always secretly likened to the shadowy pool under the willows, narrowed, and her lips parted.

Fortunately for Samuel, company came soon after they rose from the table. Even Minnie was drawn into the discussion of neighborly interests. Potter soon left, announcing that he must go "alone up into the hills, to meet the angel Zabak who brings to me a message for my people."

"Say, Sam, what do you think of that man?" Will Marshall asked as soon as the door closed behind Potter.

"I think he's a darned fake. The idea of a feller like him sayin' the Lord sent an angel to meet him! An' then there's his bluff 'bout his havin' inside information 'bout the comin' of the day of judgment."

Minnie Holt's face grew ghastly. "Oh, don't talk that way, Samuel!" Then she turned to the Marshalls. "I am sure Elder Potter is a man sent by God, to bid us of the valley flee from the wrath to come. The end is near, near."

Soon the guests rose to go; the open difference between husband and wife made them all uncomfortable. Nothing more was said by the Holts about the matter, but they both attended the evening service.

Whatever Aaron Potter had met up in the hills that afternoon he went into the rude desk that did duty as a pulpit with a determined air. "I have a new message for the valley," he announced in his shrill high-pitched voice. "Some here have dared to question the Word of God. Let them take heed. On the sixteenth day of this tenth month the Lord will meet his own in the clouds. Them who deny him and question the word of his messenger shall be cast into the bottomless pit, to suffer torment."

He went on, his voice rising higher and becoming more hysterical, while his right hand beat a nervous tattoo on the desk's top. Denunciations and threats rolled from his tongue. A girl in the back of the room began to sob.

Samuel Holt's breath quickened. It was not the speaker he was watching but Minnie. Again her hands were clasped, this time on the desk before her. On the woman's face was a look of agony. Dimly Samuel sensed the fact that to his wife every word Poter was speaking was the truth.

The man was vaguely troubled. No word passed between the man and woman regarding the service; they walked home in silence. Before retiring Minnie knelt long by the bed in prayer. Samuel heard her murmur his name with broken sobs and pleadings.

"Why, I reckon she's prayin' for me. She's 'fraid I'll lose out a week from Tuesday," Samuel said to himself. Then he added, as he turned over to go to sleep, "I reckoned Minnie had more sense."

Tuesday Samuel drove to the old grist mill, a mile down the river, with two bags of corn. The miller, Evan Holt, was Samuel's cousin. He came hurrying out of the steep-roofed, weather?beaten building, to say:

"I'm right glad to see you, Sam. Come in."

"No, I reckon I'll drive on down to town while you grind the grist."

"Come in, Sam. I'm 'lone, an' there's somethin' I want to say to you."

After the corn had been disposed of, the two sat down in an open doorway that commanded a view of the river as it swept over the dam. The noise of the waterfall compelled them to raise their voices. Evan Holt went straight to the point.

"Sam, what do you think of Elder Potter?"

"I think he's a cheat an' a rascal," was the prompt reply.

The miller started back. "Don't say that. No wonder Minnie's worried 'bout your salvation. Sam, the end's most here. Me an' Carrie's made up our mind to show our faith by doin' what Elder Potter says we ought to do."

Anger choked Sam. "I thought you had more sense," he sputtered. "What fool thing is it?"

"Jest prove our faith by deedin' over our property to him."

"What? What do you mean, Evan? is he a thief as well as a fool?"

"Don't talk that way, Sam. Every one of them idle—an' wuss—words will be a millstone, a hangin' 'round your neck. Minnie'll give up the farm, to save you, but it won't do it."

Samuel stood up. His ruddy face was stern, threatening. "See here, Evan. Potter won't git our farm; I can promise you that. Don't you see it's jest a trick, to git your mill an' stuff?"

"What good'll it do Elder Potter, if the end of the world comes next week?"

"Oh, he don't believe his own preachin,' course he don't. If he did, what would he want any one to deed him property fur?"

"It's jest to prove our faith. Minnie'll do it, an' you can't help yourself The farm's her'n."

Instead of going on to town Samuel returned home. While he quivered with rage he resolved to refrain from speaking to his wife about the matter until after that evening's meeting. Perhaps the man would show his hand at that time.

Potter spent a half hour painting the tortures to be endured by those who met the dawn of the next Tuesday unprepared. So deftly did he do it that the room resounded with sobs and cries. The speaker and his followers were to congregate at Table Rock, half way up the side of Mount Royal, a low peak that guarded the valley on the north.

"There the Lord will meet his own. Only them that's made the great sacrifice will be caught up into the clouds with the Lord and his messenger," and the man smote upon his breast, as if to call attention to himself. "All earthly possessions must be renounced. It has been give to me, as a message off the altar, that you who have houses and lands are to prove your faith by making them over to me. It's not for my profit that I bide you do this."

"Why do you then?" Samuel Holt demanded.

His wife winced and drew back, shivering, as from a blow. Aaron Potter threw out his hand melodramatically.

"Get thee out from him, Satan! This erring brother still lacks the faith that means salvation. It is to prove the faith o' my followers, Samuel Holt, that I come down off the Mount o' Holiness, where I git my orders, to bother with deeds and transfers."

Samuel said no more. He did not care for Potter's denunciations or for his neighbors' looks of reproach, but Minnie's white, despairing face touched him.

Not until the next morning did Samuel attempt to talk with his wife. The day was gray and overcast with a high wind. Dun mist shrouded the hills. Neither of the Holts ate much breakfast. Suddenly Samuel asked:

"You don't 'prove of Potter's tryin' to fleece the valley folks, do you?"

"O Samuel! Don't talk that way! We've only a few more days together, unless you repent. And I—Samuel, I reckon I can't be happy in heaven without you."

That admission, wrung from the woman's trembling lips, strangely affected Samuel Holt. He drew himself erect and threw back his head, as if scenting the thrill of battle. "You poor little critter! I'd like to wring his neck for scarin' you so."

She began to cry. He tried to sooth her, but at last asked:

"You won't do such a foolish thing, Minnie, as to deed the farm—our home—over to that feller?"

(Concluded Next Week).

SMILES

A man with an impediment in his speech went into a store where second-hand automobiles were sold and stopping in front of a car, he said, "H-h-how m-m-much is th-this one?"

"I'll let you make me an offer," the dealer told him.

"I'll g-g-give you f-f-f—."

"Four hundred? I'll take it," interrupted the dealer.

"G-g-good!" said the stutterer. "I was tr-trying to say f-f-five hundred."

Mother did finally succeed in getting father to go with her and little Chester to church. When they had returned home the inspired Chester chirped, "Mama, you said heathens don't wear clothes." To this mother replied: "Yes, that is right, they don't." The perplexed Chester continued: "Well, then, why did Pa put a button in the contribution box?"

First Farmer—"How do you find your new hired man, Ezry?"

Second Farmer—"I look in the shade of the tree nearest his work."

THE AGRICULTURIST'S GUIDE

The Pennsylvania Farmer is a splendid magazine, especially for the farmer, who it's beat has never seen. Of great value are its contents, along most every line, that pertains to thrifty farming, much encouraged these hard times. The best of information and instruction can be found, in its welcomed weekly issues based on authority sound. Let it do your advertising for its terms are very fair, and is sure to bring you best results as it travels everywhere. —A Young "Walt Mason."

STARTING IN FARMING

The question asked recently by "A Reader," and headed "Can He Farm?" is very easily answered in one sense —"Oh, yes, he can certainly farm." The increasing numbers of vacant farm homes bear silent witness to the fact that here is unlimited room for anyone with agricultural preferences. The point is, whether or not, he can afford to farm.

One of our foremost dairymen, who was also an extreme orchardist, said two or three years ago that he had to have his orchard so that he could afford to keep his cows. He has since died, from no other cause than overwork; and this year his fruit, which is by far the largest and most choice collection in the county, won't pay the cost of marketing and most of it is spoiling in the orchard.

When my husband died eight years ago I bought five acres of land and started a small poultry, vegetable and fruit plant as the most practical means of supporting myself and my baby girl; the experiment has not been entirely a failure for I still have my little home and have added many improvements to the original property but it isn't turning a penny and I have returned to the school room this year as the only means of keeping the wolf from the door. My school is a nearby rural one and its treasury is empty—money has been due for some time but none is forthcoming and the farmers simply say "they have no tax oney and no immediate prospect of any." I have apples, pears, vegetables and various kinds of produce for sale, but not any of it would pay the expense of marketing.

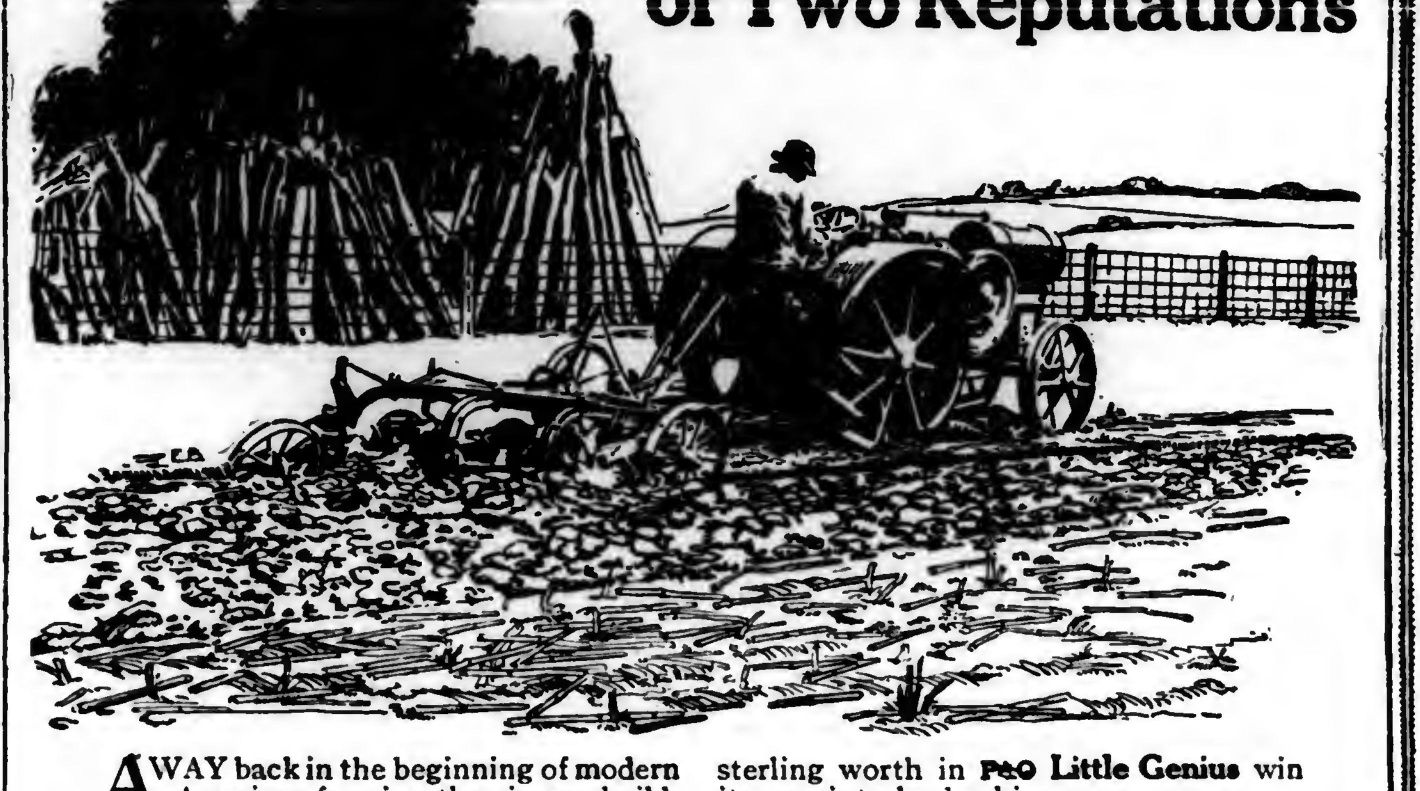
Butter is a drug on the market and the milk situation never was worse. I'm not a pessimist or a calamity howler but nowhere are the clouds more dense than over the farm. We hear that prices are dropping and no doubt they are, but while farm produce drops first and manufactured goods last, how is the farmer to keep his head above water? A little land on which to raise potatoes, a good garden, and a home supply of fruit, is very desirable at this time, but when it comes to tying one's self to a big farm heavily stocked most of us can sympathize with the father father of a little lad who recently told me, "Papa," says he, "slipped into this easy enough but he can't see how he is ever going to slip out."

I should strongly recommend that the young man and his bride think twice before they "slip in" lest they too, wonder how they're going to "slip out."

THOUGHTS ON LIFE AND BUSINESS

Excess is an arch enemy of success.

If top-notch effort yields you no happiness, there's something wrong either with you or yours efforts. Sit down and do some analyzing.



The Blending of Two Reputations

AWAY back in the beginning of modern American farming the pioneer builders of farm machines began their work. For more than three generations the genius and skill of good plow makers at Canton, Illinois, ran parallel with the skill and genius of good farm machine builders now united under the name of the International Harvester Company.

From the pioneer days down to date these industries were intent on providing the farms with quality machines. They were ever on the alert for improvement and progress.

When, fifteen years ago, this Company began putting practical tractors on the farms, the Parlin & Orendorff plow makers began the development of a superior line of tractor plows. As the **International Tractors** developed into popularity, so did the sterling worth in **P&O Little Genius** win its way into leadership.

It was fitting, therefore, that eventually the International Harvester Company should join together the extraordinary success of **P&O Plows** and **International Titan Tractors.** For a long period now these reputations have been blending. **P&O** Plows are a part of the International line. International Harvester Tractors and **P&O** Plows have long been working together efficiently.

Many thousands of new owners of these long-famous plows and tractors, who are turning soils with them in every corner of the land, know that this close and necessary association of power and plow is making for better plowing and more completely successful tractor farming. **P&O** Plows and Titan and International Tractors recommend themselves.

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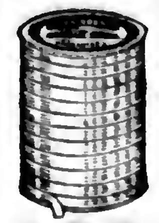

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Markets

PHILADELPHIA PRODUCE

—November 15, 1920.

Supplies of potatoes are the heaviest they have been this season, most of which are Penna. potatoes, the market is steady and a trifle lower than last week. Lehigh Co. Penna potatoes sold today at $1.70@1.90 cwt. while potatoes from other Penna. sections ranged from $2@2.25 cwt. N. J. Giants are $3 150-lb. sack for No 1s, and No. 2s at $1.75@1.85 sack. Eastern Shore potatoes at $3@3.25 bbl. The nearby farmers are selling at 65@80c ⅝-bskt. for No. 1s, No. 2s at 35@50c.

There were liberal supplies of sweet potatoes from the Eastern Shore section selling at $2.75 bbl Nearby sweet potatoes show a very wide range in quality, averaging mostly 90c@$1.10 ⅝ bskt., No. 2s, 35@60c basket.

Vegetables—Artichokes are meeting a good demand at $7 per box and $13 drum. Bunch beets 40@60c ⅝-bskt. Brussel sprouts at 15@22c. Nearby carrots are 40@75c ⅝-bskt. New York state rough carrots, 75@85c 75-lb. sack. Cabbage is here heavy supply, market weak at $10@12 ton on domestic and $14@16 ton on Danish. Cauliflower some from L. I. selling at $7@7.50 bbl. Celery is equal to demand, Penna. selling at 10@20c bch., N. Y. state 40@75c bch. Eggplants are very scarce. Lettuce bringing high prices, some N. J. selling today at $1@3.50 box. Onions unchanged $1.40@1.75 sack, western, $1.75@1.90 100-lb. sack. Mushrooms $1@1.75 3-lb. bskt. Parsnips 50@75c ⅝ bskt. Parsley $1@1.50 hamper for N. J., while Penna. sells at 2@2½c bch Radishes, 1½@2½c bch. Turnips at 35@65c ⅝-bskt.; whites, yellows, 50@90c bskt N. J. spinach 50@60c ⅝-bskt. Watercress, 2½@3c bunch.

Fruits—There has been an improvement in the market on fancy apples. Common apples remain unchanged. Prices for fancy apples are about 50c bbl. higher than a week ago, as the following quotations will show: Baldwins, $4@4.50 bbl; Ben Davis, $3@3.75; Greenings, $4@5; Hubbardsons, $3.75@5; 20-Ounce, $3@5.50; 20-Ounce Pippins, $4@4.50; Kings, $4@6; Grimes Golden, $4.75@5.50; York Imperials, $3.75@4.25; Missouri Pippins, $4@4.50; Wagners, $4@4.50; Tallman Sweets, $4@4.50; Rome Beauty, $5@6; Jonathans, $6. Apples in bu bskts. ranging 75c@$1.50 bu. Western, $2.75@4 box. The market for pears is nearly over. A few pears sold here $4@8 bbl. Sheldons, with other varieties at $5@6 bbl. Kieffers 90c bu while nearby Kieffers bring 40@75c ⅝-bskt. Quinces nearly over, but one car here this morning sold at $9 bbl. $2.50 bu. Cranberries bring $10@13.50 bbl. Fancy, $3.50@4. N. Y. state grapes are practically over, a few cars sold at $1.35@1.45 12 qt. bskt. A few pineapples sold at $5@9 crate.

Poultry—There has been a slump in the prices on live poultry since our report last week. Supplies heavy and the market is steady. Live fowls, heavy, 32@35c; medium fowls $23@30c; Leghorn fowls, 23@24c; spring chickens, 27@30c; common spring chickens 24@26c; leghorn spring chickens, 23@24c; live turkeys, 40@45c; geese, 25@30c; ducks, 25@34c. With Thanksgiving approaching there is an improved demand for dressed poultry which is selling as follows: Turkeys, 45@52c; fowls, 30@40c; broiling chickens, 41@47c; roasting chickens, 35@40c; old roosters, 28c.

Eggs—There has been quite an advance in prices since last week, and supplies are scarce, the market is firm and the high prices are curtailing the demand. At this writing Penna and nearby current receipts are selling at 80c doz. Firsts, 82@84c; selected and candled, $93@94c doz.; western firsts, 77@80c doz.; western extra firsts, 82@84c.

LANCASTER PRODUCE

—November 13, 1920.

While eggs were scarce and brought from 85 to 96 cents a dozen on market this morning, many of the farmers when questioned predicted cheaper eggs before the holidays. A marked diminishing in vegetables with the exception of potatoes was in evidence. Quotations:

Butter and Eggs—Fresh eggs, 85@96c a dozen; country butter, 70@75c lb.; creamery butter, 80c lb.

Poultry—Dressed fowls, $2@2.25 each; broilers $1.50@2 ea.; squabs, 50c@$1.75 ea.

Vegetables—Parsnips, 10c box; spinach, 15@20c ½-pk.; turnips, 30c ½-pk.; peppers, 2@3c ea.; cucumbers, 5c ea.; potatoes, 20c ½-pk.; $1.20@1.25 bu.; sweet potatoes, 30@40c ½-pk.; cabbage, 5c hd.; cauliflower, 15@25c hd.; lima beans, 25c pt.; onions, 10c box; red beets, 5c bch.; beans, 30@40c ½ pk.; rhubarb, 3@5c bch.; celery, 5, 10@25c bch.; tomatoes, 10@15c box

Fruits—Peaches, 10@15c qt box; apples, 15@25c ½ pk.; pears 25@30c ½-pk

Miscellaneous—Scrapple, 15c lb.; lard, 25c lb.; hominy, 12@15c pint, and cider, 40@50c gal.

YORK PRODUCE

—November 13, 1920.

The market continues draggy with indifferent buyers as a rule. Quite an abundance of fall produce was displayed until Friday's heavy freeze finished the crops still out. Within two weeks all but the stored goods will be off the market. Truckers have put [illegible] bushels of green tomatoes in their [illegible].

Eggs—80@85c dozen.

Butter—Country, 65@70c, separator, 75c lb., milk, 14c qt.

Poultry—Hens, 26@30c lb.; dressed, $1@2.25

Vegetables—Potatoes, 15@20c ½ pk.; $1@1.25 bu.; lettuce, $5@15c hd., cabbage, 4@10c hd.; beets, 5c box, radishes, 5c bch.; onions, 5c bch.; 15@25c ½ pk.; corn, 20@40c doz.; peppers 15@20c doz.; lima beans, 40c qt.; soup beans, 25c qt.; squash, 3@5c; ham, sliced, 45@96c lb.; whole, 40@45c lb.; lard, 25@27c lb.

Fruit—Apples, 10@40c ½-pk.; 50c@$1.50 bu; peas, 15@40c ½-pk.; tomatoes, 1@7c each; 15@30c ¼-pk.

Retail Grain Market—Wheat, $2.50; corn, $1.50; oats, $1; rye, $1.75; bran, $3 cwt.; middlings, $3.50 cwt.

Wholesale Grain Market—Wheat, $1.90; corn, $1; oats, 55c; rye, $1.45; bran, $45 per ton; middlings, $55 per ton.

PITTSBURGH PRODUCE

—November 13, 1920.

Butter—Prints, lb. 69@69½c; tubs, lb. 68½@69c; Pa & Ohio, 62@63c; eggs, select 75@77c; do at mark, 68@70c; do storage, 57@58c; cheese, Sweitzer, 31@31½c; Limburger, 31@32c; N. Y. cream, 31½@32c; Roquefort, imp. 81c@$1.15; Longhorn, 29½@30c.

Vegetables—Beans, $3.25@3.50; garlic, 10@12c; cabbage, bbl $1.50@2; cauliflower, box, $2.50@3; celery, crate, $3.50@4; lettuce, chip, 30@35c; onions, sacks, $1@$1.25; do Spanish, $1.25@1.50; Spinach, bu. $1.25@1.50; mushrooms, bskt. $1.75@2.25; potatoes, Giants sacks, $2.50@3; do Cobblers, sacks, $2.50@4; do sweets, N. J. hamper, $2@2.25; radishes, 25@30c; parsnips, bu., $1@1.50; turnips, bu. $1.25@1.60; beets, bu. $1.25@1.50; Rutabagas, bbl. $3@3.25; peppers, $1@1.25.

Fruits—Apples, do green bbl., $4@5.75; cranberries, box $3.50@4.50; grapes, 15-lb. bskt $2@2.25; pears, Kiefer, bu. 90c@1.25; oranges, $3.50@8.50; lemons, Cal., $5@7; quinces, bu $2.50@3.25; do bbl., $7.50@8.

Nuts—Chestnuts, lb 23@25c; Walnuts, Cal., 32@35c; do, black, lb, 3@3½c; Filberts, lb. 15½@16c.

BALTIMORE PRODUCE

—November 13, 1920.

Vegetables—Potatoes, white, Md., Penna. and nearby, 100 lbs., $2@2.10; do Jerseys, 150-lb sack, $2.75@3, do Eastern Shore, McCormick, 100 lbs., $1.50@1.65; sweets, yellow No. 1, new, bbl., $3@3.50; do Anne Arundel bbl $4@4.25; do Eastern Shore, Md and Del, bbl $3@3.50; apples, loose packed, No 1 bu., $1@1.50; do No. 2 bbl., $1@1.50; do Western Md and Penna., packed bbl., $3.50@6. Beans, native, stringless, bu $2; do native green, bu., $1.50@2. Beets native, bch. 3@4c. Cabbage, native 100, $2@4; do N. Y. state ton, $8@12; eggplants, native bskt. 30@40c. Grapefruit, Fla., box, $4@4.50; grapes, N. Y. bskt. 25@27c; kale, native, bu box, 35@40c; lettuce, native, bu box, $1@1.50; lima beans, hamp., $3@3.50; onions, Md and Penna., yellow, lb. 1½@1¾c; oranges, Fla. as to size, box, $5.50@6.25. Pears, Kieffer bbl. $1@1.25; do bskt. 15@25c. Peppers, native, bskt., 25c; spinach, native, bu. box, 50@55c; turnips, native, washed bskt. 25@40c.

NEW YORK PRODUCE

—November 13, 1920

Butter firm; receipts 6135 tubs; creamery, higher than extras, 65½@66c; extras (92 score), 64½@65c; firsts (88 to 91 score), 48@63c; packing stock, current make, No. 1, 34c.

Eggs steady; receipts, 8398 cases; fresh-gathered extra firsts, 83@85c; do firsts, 77@81c; state, Penna. and nearby western hennery white, firsts to extras, 88c@$1.05; do, brown extras 90@93c; do gathered brown and mixed colors, firsts to extras, 77@88c.

Cheese firm; receipts, 2297 boxes; state, whole milk, flats, held specials, 27½@28¼c; do, average run, 24@25c; state whole milk, flats, current make, specials 24@25c; do average run, 22½@23¼c; state, whole milk, twins, held, specials, 27½@28c; do, average run, 24@25c

Vegetables—Potatoes, Me., 180-lb., $4@4.50; L. I., bbl., $4.25@4.75; Jy., long, 150-lb. $2.90@3.10; sweets, Jy., 1s bskt. $1.50@2; Artichokes, Cal., ½ box, $3@4; Brussels sprouts, state qt., 10@20c; beans, nearby, bskt. $1@2.50; beets, nearby bbl. $2@3; carrots, nearby, 100, $1.50@2; celery, state, bch. 15@65c; Cabbage, bbl. $1@1.50; per 100, $2@4; cauliflowers, nearby, crate, $1@4; garlic, lb. 6@12c; kale, bbl. Va., $1@1.25; lima beans, L. I. bag, $3@5; onions, state and Wis., red, $1.25@1.75; white, bag, $1.50@2.25; orange co., yel. bag, $1@1.25; Spanish case, $2@3; peppers, nearby, bskt 60c@$1.50; pumpkins, cheese, $1.50@2; spinach, nearby bskt., 50@75c; nearby, bbl $1@2; state, basket, 50@75c; Baltimore basket, 85c@$1.00; squash, Hubbard, bbl $2; turnips, white, bag, $1.25@1.50; Rutabaga, bbl. $1@1.75; bag, $1@1.50.

Fresh Fruits—Apples, bskts fancy, $1.25 bbls York Imp., $3.50@4.75; Black Twig, $4.50@5; S. Winesap, $4.50@5; Baldwin, $4@5; N. Spy, $3@4.50; Jonathan, $4@6; 20 Ounce, $2.50@5; Greening, $3@5; western, boxes, Spitzenberg, $2@3.75; Jonathan $2@3.25; Delicious, $2.25@4.25; crapapples, bush. bskt. $1.50@2; pears, bbls. Kieffer, $2.50@3; lawrence, $4@5; Clairgeau, $6@7; Anjou, $5@6; Seckel, $6@9; cranberries, E. blk bbl $9@11; do poor, $6@8; do ½-bbl., $3.75@5.50; do N. Y. crate, $2.75@3; late varieties, bbl $9@14; ½ bbl., $5@6.75; grapes, state, Catawba, 90c; Concord, bskt $1.25@1.50; Colmar grapes imported, lb., 50c; Ostrich egg melons, Colo., crate, $1@1.75; casaba melons, Cal. crate, $2@3. Avocada pears, Fla. fancy, box, $15@18.

LIVESTOCK MARKETS

—November 13, 1920.

EAST BUFFALO, N. Y.

Cattle—Receipts 750; dull Calves, receipts, 200; 50c lower, $6@18.50.

Hogs—Receipts, 3500; steady. Heavy mixed and Yorkers, $13.50; light Yorkers and pigs, $13@13.50; roughs, $11.50@12; stags, $8@11.

Sheep and Lambs—Receipts, 1400; lambs and wethers, 25c higher; lambs, $8@13.75; yearlings $7@10; ewes, $3@7; wethers, $7.50@8; mixed sheep, $6.50@7.

PITTSBURGH

Hogs—Receipts, 3000; steady. Heavies, heavy and light Yorkers, $13.50@13.75; pigs, $13.25@13.65.

Sheep and Lambs—Receipts, 500; steady. Top sheep, $8; top lambs, $13. Calves—Receipts, 25; steady. Top, $18.50.

CHICAGO

Cattle—Receipts, 5000; compared with week ago, best corn fed steers around steady, others mostly 25 to 50c lower; week top, $17.50; bulk native, $10@14; bulk westerns, $8.25@10.50; butchr cattle, unevenly 25c to 75c lower; canners and cutters steady to 25c lower; light and handyweight veal calves strong to 25c higher; heavy shipping calves, $1 lower; stockers and feeders steady to 25c lower.

..**Hogs**—Receipts 6000; mostly 10 to 15c higher than yesterday's average, spots more on in-between grades; top, $13.05; bulk of sales, $12.30@13; pigs about steady, bulk of desirable 100 to 13 lb. pigs, $12.5@13.75.

Sheep—Receipts, 3000; compared with week ago, fat lambs closed 15 to 25c higher, yearlings steady; sheep, 73c to $1 lower; feeder sheep and lambs steady.

NEW YORK

Cattle, receipts, 570; no trading. calves, receipts, 560; irregular, veals, $14@21; culls, $10@13; grassers, $7@9; westerns, $8@12.

Sheep and Lambs—Receipts, 4050; steady. sheep (ewes), $3.50@7; culls, $2@3; yearlings, $3@9; lambs, $10@13.50; culls, $8@9.

Hogs—Receipts, 2990; steady at $13.50@14.50; roughs, $12.

PHILADELPHIA HAY AND GRAIN

—November 13, 1920.

Baled Hay and Straw—Receipts, 12 tons of hay and 9 cars of straw. Quiet but steady. We quote: Timothy hay, No. 1, none here; No. 2, $30; No. 3, $27@28; sample, $22@24; no grade, $18@20. Clover mixed hay, light mixed, $29.50@30; No 1 mixed, $27@28. Straw, No. 1 straight rye, $21@21.50; No. 2, $19.50@20; No. 1 tangled rye, $17.50@18.50; No. 2 do, $17@17.50; No. 1 wheat straw, $17@17.50; No. 2 do, $16@16.50.

Bran—Steadily held but quiet. We quote: Car lots, including sacks, soft winter bran, western, in 100-lb. sacks per ton, $43.50@44.50, spring bran, in 100-lb. sacks, per ton, $43@43.50.

Wheat—No. 2 red winter, $2@2.05; No. 2 red winter, garlicky, $1.86@1.91

Corn quoted at $1.14@1.16 for No. 1 yellow.

NEW YORK HAY AND GRAIN

—November 13, 1920.

Feed.—Feed quiet but steady. The market was quiet with buyers apparently well supplied. Offers, however, were again small and the undertone was steady. The arrival of colder weather was expected to bring about improvement in the demand and possibly a better feeling in the market.

Quotations: City feed bran, $43; middling, $44, in 100-lb. sacks; red dog, $70, nominal, in 100-lb. sacks; western spring bran, $42; standard middling, $41; flour middling, $52; red dog, $65, all in 100-lb. sacks; 30-day shipment. Oat feed, $22; rye middlings, $39; white hominy feed, $45, all in 100-lb. sacks. Cottonseed oil meal, $51.50; linseed oil meal, $51, in 100-lb. sacks.

Hay and Straw—Offerings are ample for all requirements, trade very slow and market is easy and tendency downward. Rye straw, quiet and weak. Oat straw about steady.

Hay—Large bales timothy, No. 1, $41; No. 2, $38@39c; No. 3, $36@37; clover mixed fancy, $40; No. 1, $36@38; No. 2, 33@34; clover mixed fancy, $38@39; No. 1, 35@37c; No. 2, $31@33. Straw, large bales, No. 1 rye, $24; No. 1 oat, $17.

Wheat—No. 3 red c i f, $2.02; No. 2 hard winter, $2.02; No 2 mixed durum, $2. Corn, No 2 yellow, $1.08¾, No. 2 mixed, $1.06¾; No. 2 white, $1.07¾; oats, No 2 white, 63½. No. 3 white, 62½c. Rye, c i f, $1.70½. Barley, c i f, malting, $1.12@1.15; feeding, $1@1.03.

PITTSBURGH HAY AND GRAIN

—November 13, 1920.

Receipts more liberal, still demand is fairly active for all good grades of hay. There is no accumulation. Buyers acting slowly and purchasing for their immediate wants only. The trade generally is holding off, anticipating lower prices in line with all other commodities. We are reducing our prices on all grades of tame hay. Prairie hay weak. Straw receipts and demand both light but top prices can be realized for all arrivals. Market steady. Oats and ear corn demand slothful. Somewhat difficult to realize present market quotations. Market weak. Shelled corn demand fair. Receipts normal. Market firm.

No. 1 timothy hay, $31.50@32; standard timothy hay, $29.50@30.50; No. 2 timothy hay, $27.50@28.50; No. 3 timothy hay, $24@25. No. 1 light clover mixed $28@29. No. 1 clover mixed, $30@31. No. 1 oat straw, $17@17.50; No. 2 oat straw, $16.50@17. No. 1 wheat straw, $16.50@17. No. 2 wheat straw, $16@16.50; No. 1 rye, $17@17.50; No. 2 rye, $16.50@17; New No. 2 white oats, 60½@61c; No. 2 yellow ear corn, nominal; No. 2 yellow shelled corn, $1.03@1.04.

PHILADELPHIA DAIRY MARKET

—November 13, 1920

Butter—Receipts, 419 tubs. The usual Saturday quietude prevailed in this market, but there was very little high grade butter offered and prices were firmly maintained. We quote as follows: Solid packed creamery, fancy, high-scoring goods, 65@67c the latter for jobbing sales; extra, 64c; extra firsts, 59@62c; firsts, 47@55c; seconds, 38@44c; sweet creamery, choice to fancy, 66@68c; fair to good, 55@65c; ladle-packed, as to quality, 32@37c; packing stock, 25@30c; fancy brands of nearby prints were jobbing at 73@75c; good to choice, 65@72c; fair to good 62@64c.

Eggs—Receipts, 2050 cases. Strictly fine fresh eggs were in small supply and firm, though there was no activity in trade. Most of the offerings however were of more or less unattractive stock, which was quiet and irregular in value. We quote the following: Nearby firsts, 82@84c doz.; nearby current receipts, 80c doz.; nearby ordinary to fair, 70@76c; western, extra firsts, 82@84; firsts, 77@80c; inferior lots lower; jobbing sales of fancy candled fresh eggs, 93@94; fair to choice, 85@92c.

Cheese—Firmly held. We quote: New York whole milk, Flats, fancy held, 27@27½; do fancy fresh, 24½@25½c; do, common to fair, fresh, 22@24c; longhorns, held, 27@28c; do, fresh 27@27½c; single daisies, held, 27@28c; do fresh, 26½@27c, jobbing sales of fancy held goods, 30@31c.

PHILADELPHIA LIVESTOCK

Receipts for week ending November 15:

	Beef cattle.	Sheep & lambs.	Hogs	Calves
Totals for week	2744	11450	10247	1795
Previous week	2893	11255	[illegible]	[illegible]

Beef Cattle—There was a fair demand for steers and cows and values were steadily maintained under moderate offerings. Veal was firm and the market was slightly higher, due to moderate supplies and a fairly active demand. Quotations: Steers, good to choice, $12.50@14.50; fair to good, $11@12; common to fair, $9.50@11; cows, western, good to choice, 8½@9½c; do, fair to good, 7@8½c; bulls, 6@8½c; calves, extra to choice, $19.50@20; fair to good, $[illegible]@18.50; common, $11.50@13.50; Tennessee, $16.50@17.50; other southerns, $[illegible]@10.50.

Sheep and Lambs—There was a fair demand for desirable grades of sheep and lambs and the general market ruled steady under moderate offerings. Quotations: [illegible] sheep, wethers extra, $7.50@8; do good to choice, $6.50@7; medium, $5@6; common, $2@3; ewes heavy fat, [illegible]; lambs, spring choice, West Virginia $[illegible]@13.75; choice, Penna., $13@13.[illegible]; medium, $11@12; common, $9@10.

Hogs—Prices of western stock were easier due to more liberal offerings and bearish outside advices. Nearby stock ruled steady with a fair demand for desirable stock. We quote: Best western, $15.50@16; [illegible] $14.25@14.50.

City Dressed Stock—Steers and heifers were quiet and the market was lower, due to more liberal offerings and increased pressure to sell. Veal of desirable quality was firm and slightly higher. Sheep and lambs of fine quality were in fair request and steady. Hogs sold slowly and showed no important change. We quote: Steers, 18@24c; heifers, 14@18c; cows, 10@16c; calves, [illegible] dressed, choice, 29@31c; calves, [illegible] dressed 26@28c; lambs, spring, choice, 27@29c; sheep, 10@18c; hogs, 23[illegible].

NEW YORK MILK MARKET

—November 15, 1920.

Supply of milk still heavy, altho receipts of cream have fallen off. Demand continues very slow and surplus being worked up into butter and cheese fully as great as the week previous. The November rate for 3 per cent milk in 200-mile zone is $3.65 per 100 lbs; add 4c per 100 lbs. for each additional one-tenth of one per cent butterfat.

Receipts of milk and cream in 40-qt. cans for the week ending Nov. 13, 1920, were as follows:

Railroad.	Milk	Cream
Erie	39948	[illegible]
Susquehanna	12558	[illegible]
West Shore	13982	[illegible]
Lackawanna	57970	[illegible]
New York Central (long haul)	190182	[illegible]
Ontario	46868	[illegible]
Lehigh Valley	51863	[illegible]
New Haven	6850	75
Pennsylvania	12615	[illegible]
Other sources	600	[illegible]
Totals	438830	117[illegible]
Same week last year	371918	[illegible]

TOBACCO MARKET

—November 15, 1920

The tobacco selling situation is practically at a standstill in this state. A few small crops were reported sold during the week—as low as $20 per cwt. Very few growers will even consider this price as they have all united for $25 to $30 per cwt. at [illegible]. It is noted that the prominent buyers have not yet entered the field and until then prices to be offered will not be known. Never have there been such marked determination to have fair prices and it is evident [illegible] sides that the "landslides" of the past are no longer possible no matter what the designing clique of buyers try to manipulate.

As stripping and sorting progresses it is more evident that the product of the present year is of a more superior and desirable quality. And now that freezing weather has reduced the moisture content of the cured plants piling will be safe and [illegible] enabling steady stripping from day to day especially during weather which makes outdoor work unpleasant.

In this important process neatness and care should not be overlooked. A desirable crop may be made common or a common crop made fairly good in the handling. [illegible] skill is required in properly stripping and preparing for market than in the growing of a tobacco crop. An established reputation for careful handling will ever attract buyers and insure top prices.

INTERSTATE MILK PRICES

—November 13, 1920

Prices for November remain the same as those of October.

Farm Products Prices and Prospects

OUR BUSINESS LETTER

The Business Outlook

The past week has been characterized by a continuation of the business recession which has been more and more pronounced during the last several months. More factories have closed down increasing the amount of unemployment or working schedules have been reduced. Cancellation of orders continues in many lines, the primary producer finding even this means of protecting himself from the risks of market declines rather ineffective under times like the present. Failures are increasing steadily and the size of liabilities indicates that larger firms are involved.

Foreign exchange rates sagged to new low points on this downturn. Heavy offerings of bills for the sale of grain, cotton and provisions are partly to blame for this weakness. Foreign money is queer stuff, as it is far from being on a complete gold basis. To the $10,000,000,000 loaned by our government to European countries during the war, must be added $3,500,000,000 for exports which the foreign brethren have not been able to pay for. Obligations covering these debts for exports are held mostly by banks. Two fairly large failures during the week were firms engaged in the export trade. Plans to promote the sale of our farm products abroad which have been properly advocated by farm leaders must take this doubtful foreign currency and the pre-existing debt of $13,500,000,000 to us into consideration. Tariffs to protect wool, wheat, peanut and bean growers, butter producers and others against foreign competition encounter the fact of this debt, also since fundamentally Europe can only pay us in goods or services.

Railroads a short time ago were deluged with clamors for cars but the recession in business, the slowing up in the movement of farm crops due to low prices, and the increased efficiency on the part of the railroads has corrected this situation so that now in most sections cars may be had for the asking.

Commodity prices declined during the week. rude rubber reached the lowest level ever known, steel prices are getting down from the high perch they have been occupying and sugar continued its decline. The farm grains and cotton began their descent sooner than most products but the unfavorable outlook in other lines resulted in new declines to the lowest levels in over four years.

The general complaint in all markets is that buyers are holding off. Prices in many farm products have gone down too far but for several weeks those who have concluded that prices were low enough and have made purchases have seen the market recede still further so that they would have been able to replace their purchases at lower figures. Until stocks are reduced so that the quantities of various commodities offered for sale becomes no larger than the requirements for immediate use and the markets become more firm, there is little prospect of enough buying against future needs to give the markets much buoyancy.

The Outlook

Opinions differ on the outlook. The past period of general prosperity has continued for several years and past history shows that such events are followed by a cycle of depresion of an equal extent. It will take several years for the total process but intermediate periods of temporary advance wil occur. Events seem to be shaping up for such an advance during the next spring months. Farmers who have been holding wheat for higher prices may be obliged to wait for this period before their hopes will be realized. The present recession has already gone farther than most men of large affairs who keep in close touch with the pulsations of commerce had anticipated so that they have been obliged to revise their estimates of the time when a rally would come but improvement by the approach of spring still seems altogether likely.

Present Prices and the Farmer's Investment

The loss of interest is always less tragic to the individual or the business than is the loss of capital which represents savings from previous labor and use of the materials of production. When conditions are so adverse as to cause a loss of the fruits of labor, of profits, of interest, and in addition wipe out a part of the capital.

Present farm crop prices are unusually unsatisfactory because they seem to be doing that very thing. Land values which were marked up during the era of high prices are disposed to sag under the influence of falling prices for farm products. The tenant farmer who became a land owner or the young man starting to farm who purchased land at the higher level is injured severely.

The fact that this form of risk has always eixsted in other lines of business should ont be overlooked in comparing the farmer's position with that of men engaged in industries and in merchandising. The middle man stands in peril of it and suffers from it unless he is careful. Co-operative enterprises which take over the middleman's function must assume this risk. Since farmers have had acquaintance mostly with business in which this danger has not existed to a marked extent they may underestimate its importance and fail to make due allowance for it in deciding what can be accomplished by co-operative effort. Such efforts are not to be abandoned because of this element of risk but it should not be overlooked in making calculations.

Fall Cleanup of Cattle

Cattle markets are dominated at present by the pre-winter cleanup. The past week was a period of sharp decline due to a sudden spurt in receipts around the market circle and weakness in the dressed beef trade. Westerns especially were more abundant. In addition, many feeders have evidently become alarmed at the declines which are in evidence in various commodities and let go a lot of slightly warmed-up cattle. The percentage of finished steers is unusually small, nevertheless quotations upon prime grades of all weights have been reduced with yearlings receiving some preference.

Toward the week's close the market tone improved slightly but the loss was not fully regained. Practically all classes show some lost ground, veal calves being in strongest position while cows and heifers on the intermediate order declined most.

It is believed that the western run will decline altho the number may be fairly liberal until the end of the month. There are also a few Canadian cattle for our markets to absorb. The Christmas trade should support the market for finished steers during the next thirty days but thereafter the outlook on this class is not so favorable while increasing scarcity of lighter weights after the grass season is definitely closed will tend to narrow the spread still further. A leading packer advises holding back unfinished cattle until they are actually ready for slaughter. This may be good advise but it is noteworthy that packers did not store much frozen beef, during the grass season which does not argue great faith on their part in the outlook. However, the fact that the carryover is light is to be considered in figuring prospects.

Extent of Decline in Feeder Movement

Country demand for feeders continues relatively light, buyers insisting on purchasing at bargain prices. This is good business policy altho it works hardships upon those who produce the feeders' raw material.

Potato Markets Irregular

Potatoes. — Increasing supplies forced lower prices in Chicago toward the last of the week. Car lots declined sharply over the week end and closed $1.90 to $2.05 per 100 lbs., 35c below the high point of the week, while supplies continued heavy and demand slow. Wisconsin, Minnesota and Michigan shipping points retained a net gain of about 15c, closing $1.80 to $1.95 per 100 lbs. f. o. b. sacked. Eastern New York shipping points advanced 10 to 15c, and eastern stock was firm in consuming centers, ranging $2.35 to $2.60. Prices paid to growers the country over ranged $1.15 to $1.50, lowest in Idaho and Nebraska. Shipments were 6028 cars, compared with 6170 the week before and with 4628 during the corresponding week last season. Heaviest movement is from the northern lake region and from New York and Maine.

Apples.—Baldwin apples A 2½ continued nearly steady at western New York shipping points, ranging $4 to $4.25 per bbl. f. o. b. Bulk sales strengthened to a range of $1.25 to $1.35 per 100 lbs. Baldwins A 2½ strengthened slightly in New York city, ranging $4.25 to $5.25 per bbl and southeastern York Imperials advanced 50c in consuming markets ranging $4.50 to $5. Other varieties and markets were nearly steady. Northwestern Winesaps still sold at $2.25 per box f. o. b. for extra fancy. Northern Jonathans extra fancy ranged steady at $3 to $3.50 in consuming markets. Shipments of barreled stock have been nearly double those of last year for the corresponding week, while boxed apples show only slight increase. November estimate of the commercial crop is 35,417,000 bbls., compared with 26,174,000 last year; the estimate is 651,000 bbls. less for the boxed apple section, compared with the October estimate and 2,187,000 bbls. more for the barreled apple section than was estimated in October. Shipments of barreled apples are decreasing, with 4155 cars, compared with 4865 last week, but the boxed apple movement is about steady.

Cabbage Jobbing Higher

While markets in producing sections continue dull and about steady, the trend has been upward in consuming markets and the general jobbing range closed at $20 to $30 per ton bulk for Danish type stock, compared with $12 to $20 last week. Western New York shipping points still report $8 to $10 per ton bulk f. o. b. Shipments increased to 1327 cars, compared with 978 last week. The November crop estimate for nine leading commercial shipping states was 622,000 tons, compared with 289,000 last season.

Onions.—Sacked yellow stock followed a slightly stronger price range in eastern producing sections at $1.15 to $1.35 per 100 lbs. f. o. b.; sacked and consuming markets also strengthened slightly, ranging $1.25 to $2. Demand has shown some improvement during the past two weeks. Shipments show an increase to 693 cars, compared with 590 last week.

Sweet Potatoes. — Virginia yellow stock advanced 25 to 50c in New York and followed a general jobbing range of $3.25 to $4.30 per bbl. in leading eastern cities. New Jersey stock gained 25c in Pittsburgh, reaching $1.50 to $1.75 per bu. hamper and Tennessee Nancy Halls advanced 50c in Chicago to a range of $1.75 to $2 per bu. Recent shipments have been somewhat less than last season and supplies correspondingly moderate. This week's movement shows a gain of 100 cars over preceding week. Shipments are still about two-thirds from Virginia.

Miscellaneous Fruits and Vegetables

New York Concord grapes advanced fully 10c, reaching $1.45 to $1.75 per 12-qt. basket. Michigan Concords in 4-qt. baskets were firm at 50c in St. Louis. Shipments are rapidly decreasing, with 1776 cars compared with 2870 last week. Michigan, New York and Pennsylvania shipped about 500 cars, the rest were from California. New York Bartlett pears closed irregular and generally lower, with prevailing range of $2 to $3 per bu. basket. Pear shipments decreased nearly one-third with 265 cars, of which 185 were from New York. Shipments for the season, now nearly complete, have been one-third greater than last season for the same date. New York Golden self-blanching celery advanced fully $1 in New York, closing $3 to $4 per crate and ranging $3.25 to $4 in Philadelphia with general jobbing range $3 to $4. Michigan celery in flats advanced 10c in Chicago, reaching $1.10 to $1.40. St. Louis declined 10c to $1.25. New York head lettuce closed lower in Baltimore at $2 to $2.25. Shipments decreased 20 cars and comprised chiefly 84 cars from New Jersey, so far as eastern states are concerned.

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Offering will consist of gilts, all bred to the above boar, also open gilts, service boars and about 50 head Fall pigs, September farrow. Don't miss this sale, the Duroc is going over the top. BIGGER LITTERS, BIGGER HOGS and BIGGER DEMANDS should prompt you that the *Duroc* is the hog for your requirements. Complete catalog mailed on application.

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Constructive Work for Rural Schools

By Robert L. Voorhees

It is hardly fair for anyone to criticise harshly the rural school system now in use in any of our states. Granted that they are cumbersome, irrational, and do not serve the best purposes of the community, but it must be remembered that education is the hardest question to solve that ever confronted legislators or statesmen. Even noted educators admit that their knowledge of the subject, after a lifetime spent in study, observation, and experience, is almost nothing. It must be remembered that our colleges and universities, which obviously should be more advanced than any other branch, are at the present day partially inadequate to furnish a young man or woman with the material needed for success.

Every teacher, mother or father, every pupil, wants something different. What man or body of men can formulate a system to best meet all their needs? It is an impossible task. The best that can be done is to come as close as possible to the target. The bullseye has proven mighty hard to hit. Not every farm boy wants to stay on the farm, not every farm boy wants to go to the city. There are dozens of different types of agriculture to be specialized in for the boy who does want to make his fathers' farm better than his father could. How is each one to secure the best knowledge? Then again there is the economic side of agriculture. What college or university gives an anywhere near adequate course in this subject? Not one.

It is coming to be more and more believed that about the best education is the one that "humanizes" the pupil. By that is meant education that leads to ambition and aspiration. Instead of dry history teach history with a tang. Tell human tales of Washington and Roosevelt and Lincoln so that the pupil comes to reverence these men and are thus lead to emulate. In a word, teach them hero worship. Dry-as-dust knowledge doesn't make the world go around. It is obstinacy, perseverance, will to succeed, grit. Every boy and girl has more of it than is every brought out. Education can go a long ways to develop these characteristics. With them gained give them the fundamentals and let them point themselves toward what they want, the thing they are most interested in. Statistics show that a majority of men change their vocations at least once before finding a lifes' work. Many of them doubtless discard a fine, expensive education in doing it.

In New York state work is now going on in this field. A committee consisting of educators and farmers, mostly farmers, is overhauling the rural school problem thoroly. The Commonwealth Fund has given them $75,000 with which to do it. They are making a thoro survey of the present situation first. Later they will canvass the opinions of all the farmers of the state. Again, they will compare present conditions and the farmers' opinions with the practices of other states. Methodically and thoroly the job is going to be done.

Farmers are the most interested in the proposition. For that reason the committee is made up mostly of farmers. The farmers of the entire state will be consulted on every proposed change. Who can say that the resulting improvements will be improvements. Times change, needs change, no two opinions are ever alike. The farmers are going to get what they want. If it doesn't suit them they have only themselves to blame. The progress made will undoubtedly be a big step forward, but it must be emphasized that a step forward in education is so small and infinetismal that it cannot be noticed. Too much must not be expected of such work.

The committee in New York state has voted to hire the best educational and professional experts in the country to make an investigation of rural school problems. No reports of the experts will be accepted by the committee until they have met with the approval of the rural people of the state. Some of the first educational problems which will be attacked by the experts, under supervision of the joint committee, will be courses of study, instruction and supervision, the school building, school unit, whether it shall be district, town or country, and the big problem of financial support. Just enumeration of a few of the problems which have to be met are enough to furnish anyone with appreciation of what confronts the committee.

One question which has already been discussed and investigated thoroly by the committee is the problem of making courses of study in rural schools fit more closely the needs of country boys and girls. It is felt that some country schools have a tendency to educate their pupils away from the country rather than towards it. It is possible to see here the vast field for argument. It may not be right and just for the school to educate the pupil away from the country, but just as surely it is not right nor just to educate the pupil only for the country.

The committee is also directing its experts to delve deep into the subject of equalization of educational opportunity between city and country. It is an immense subject; too big to be decided in the short time the committee has to work. It brings up at once the question of specialization, which is almost proving an ogre to our schools and college. Specialization is growing by leaps and bounds. The educational system of the country must keep up to it or else find something better. At a bound the entire problem is taken into the entire sphere of educational theory. It is obvious that country people must not expect too much of their school improvement. It can't be done in a moment.

People living on the farms and in the rural villages of New York state, however, can rest assured that what can be done will be done. The personnel of the committee appointed as a result of the pressure exerted by farmers of the state is sufficient testimonial of that. It includes three representatives each of the Dairymens' League, the Farm Bureau, the Home Bureau, the Grange, the State Teachers' Association, the State Department of Education, and the State College of Agriculture at Ithaca. It is safe to say that 1921 will see some excellent proposals for the improvement of the rural school system in New York state made.

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Facts in BLACK & WHITE

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PURE BRED GEESE, Ducks, Turkeys, Chickens, Guineas, Dogs, Hares. Prices reasonable. Catalog free. H. H. FREED, Telford, Pa.

Poultry

PULLETS

Nice big April hatched pullets mixed breed. 25 for $17.50; 50, $33; 100, $165. May hatched, 25, $16; 50, $78; 100, $155.

PALERMO POULTRY FARM, R. D. Box 39, Palermo, N. J.

Sicilian Buttercups

Farm range, prize winning Buttercups. Investigate this wonderful variety. Write for circular.

MAPLE LAWN FARMS, CORTLAND, N. Y.

S. C. W. LEGHORN BABY CHICKS, for 1921 delivery. Prices low, quality of the very best layers in America. Small deposit assures you of the chicks when you want them.

C. P. SHIREY, STEWARTSTOWN, PA.

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.

SELBY PRODUCE CO., PHILADELPHIA

Pullet Sale 300 fine large S. C. White Leghorns, 5 months old, ready to lay, $3 each. Range raised. Good laying strain. Prompt shipment. Satisfaction guaranteed.

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Tiffany's Superior Chicks for 1921. Wyandottes, Rocks, Reds and Leghorns. Pekin, Rouen and Runner Ducklings.

ALDHAM POULTRY FARM, R-39, Phoenixville, Pa.

BRONZE TURKEYS for breeders. Young gobblers, $10 and $12. Old Toms, $15. Pullets, $7 and $8. Ready to ship after Nov. 15.

JESSE McLAUGHLIN, Reinersville, Ohio.

Barred Rocks (pullet mating). Excellent layers. Buttercup, Ancona cockerels and pullets. Range raised. Prices right. J. K. Cadwallader, Wellsville, Pa.

WANTED—Poultry, calves, fancy eggs, and nuts for the holidays. WM. H. COHEN & CO., 222 Washington St., New York City.

FOR SALE 5 mos. old thoroughbred Barred Plymouth Rock and S. C. Black Minorca cockerels at $2 ea. H. E. AKERS, Clearville, Pa.

FOR SALE—S. C. White Leghorn cockerels. Wyckoff Young strain, farm range, $3.00 each.

WM. I. SHERMAN, Cambridge, Md., R No. 3

BRONZE TURKEYS. Order now to get first choice. Hardy early spring toms and pullets from mature stock. Elizabeth Beals, Coatesville, PA.

PLEASE say: "I saw your adv. in Pennsylvania Farmer."

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Thin, Wormy Horse.—I have a gray horse 9 years old that is in a very run down condition. He has a ravenous appetite for food, passes short white worms, is fed plenty hay and some grain. N. J., Trenton, N. J. First of all it may be necessary to have his grinder teeth floated. Mix equal parts Flowers of sulphur, powdered gentian and salt together, give a tablespoonful in soft feed twice a day. Increase his grain ration.

Malignant Saddle Sore.—I am anxious to have you tell me what is wrong with my horse? During the summer the saddle pad seemingly rubbed his back, making a nasty sore which has not yet healed. Part of time the back has remained healed, but after a time it would open and discharge puss. The horse appears to be healthy. Have applied a salve which is guaranteed to heal such a sore. I forgot to say, he stocks in one hind leg. H. R. G., Huntingdon, Pa. Give him thirty grains of potassium iodide at dose in either feed or in drinking water twice a day. Apply one part powdered alum, two parts oxide of zinc and three parts boric acid to sore back 3 times a day. Occasionally paint sore with tincture of iodine.

Chronic Garget.—Have Jersey cow 9 years old that is inclined to have mild attacks of garget. After each attack her milk is stringy for few days. H. S. S., Hopwood, Pa. Give her a teaspoonful of nitrate of potash at dose in feed twice a day. Apply one part turpentine and six parts fresh lard to caked portion of udder once a day.

Fleas on Dog.—We have a collie dog that is bothered with fleas. The remedies we have applied do no particular good. A. W. P., Meadville, Pa. All coal-tar preparations are offensive to fleas. Tubbing him in this preparation according to directions. Make your solution of one ounce to one quart of water. It will drive away the fleas. Occasionally, dust some flowers of sulphur into coat.

PUBLIC SCHOOLS PREPARE MOST COLLEGE FRESHMEN

Ninety-four per cent of the 735 Pennsylvania boys and girls who were admitted to the freshman class at Penn State this fall were wholly prepared for college entrance in public high schools. Statistics offered by the college registrar show that freshmen this year were prepared in 357 different schools, 325 of them public high schools. Only nineteen came from private preparatory schools.

Two hundred and nineteen schools have but a single representative in the freshman class. The State College high school leads the list of schools preparing this year's class with a total of 26. Altoona High School is second with 17. Others are Harrisburg Technical High School and Peabody High of Pittsburgh, with 14 each; Williamsport High, 13; Allegheny, Uniontown and West Philadelphia High, 11 each; Germantown and Philadelphia Northeast High, 10 each; Bellefonte, Schenley and Scranton High Schools, 9 each.

Special Bull Offer

Buy one in the next 30 days and we will prepay express charges and guarantee safe delivery.

You can take your choice of ten priced at from—

$50 to $150

These are young, registered Holstein bulls of good individuality, and they are sired by bulls that are out of 30 and 40 pound dams and have from eight to twenty year record daughters.

The dams of these calves are now making creditable year records.

Write for Pedigrees and Prices

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Cows in calf to a 32-lb. son of Avondale Pontiac Echo. A grand-daughter of May Echo Verbelle. A daughter of a 30-lb. cow, 2 daughters and 1 grand-daughter of Dutchland Colantha Sir Inka, granddaughters of K. K. S. A., King of the Pontiacs, King Segis, King Lyons, King Segis Pontiac Alcathra. Tuberculin tested.

COL. GEO. BAXTER, Auctioneer.

For catalog address A. H. MARTIN, Secretary, R-1, Mt. Joy, Pa.

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Are you interested in a pure bred bull campaign? Let us tell you how such a campaign should be conducted.

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Ready for service, well-grown, and extra good individuals. They are from tested dams of fine show Veeman, Lyons strains, and are sired by King Lyons Ekster Lad, a prize winning son of King Lyons, sire of nine 30 lb. cows. To make room, will be sold at bargain prices.

I. R. FOSTER & SONS, Owego, Tioga Co., N. Y.

Long Distance Bred Bull For Sale

Aggie Creamelle Prince No. 307021. Born March 12, 1920. Sire—Delaware Tidy Abbekerk Creamelle No. 230111. Dam—Roxy Elmwood Aggie 3d, No. 232408. The sire was a prize winner at the Delaware State Fair 1920. His dam made 31 lbs. butter in 7 days.

The dam, Roxie Elmwood Aggie 3d has a 365-day record of 888.43 lbs. butter and 21,687.6 lbs. milk. She is a handsome big individual, carries a perfect udder.

Price $250. Tuberculin tested. T. A. BAKER, care of Delaware College, Newark, Del.

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High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.

C. W. Ellis, Jr., Maple Lawn Farms, Cortland, N. Y.

Registered and Grade Holsteins

Get busy you calf club promoters. I have 50 registered heifer calves, 3 to 10 months old, $100 each for the lot, choice $125 each. 200 registered and high grade cows, heifers and bulls. Car of any age that you want. Holstein heifer calves, $20 each. Express paid in lots of 5.

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BULL CALVES at BARGAIN PRICES

We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred, healthy bulls, from a clean, Tuberculin Tested Herd at reasonable prices. King of the May—Dolly Dimple—Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees.

WAWA DAIRY FARMS, 22 S. 32nd St., Phila., Pa.

FOUNDATION HOLSTEIN COWS

With A. R. O. breeding. To freshen December to March, to our herd sire, Dutchland Creamelle Denver Lad, who comes of heavy yearly producing dams. Our herd under Federal Supervision, never any reactors. You will find what you want at West Branch Farm. S. A. MILLER, Linden, Pa.

TWO GRADE HOLSTEIN HEIFERS, 11 months old, well grown, from cows that give 10,000 lbs. milk each in one year. Bargain at $50 each.

OAKS DAIRY FARM, WYALUSING, PA

MILKING SHORTHORNS—Young bulls, a few cows and young heifers of the best breeding.

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Ayrshire Bull Calves From high record A. R. Dams.

ROBERT TEMPLETON & SON, ULSTER, PA.

Reg. Holstein Bull Calves, from officially tested dams and a 30-lb. sire. Write for prices, pictures and pedigrees. Walter M. CRUTTENDEN, Forty Fort, Pa.

3 REGISTERED Guernsey bull calves of good producers, 7 and 11 months old. R. L. BALDERSON, Mgr. Silver Lake Farm, Newtown, Bucks Co., Pa.

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of Cortland, N. Y., offers pure bred cows and calves all ages, also extra high grade Holstein heifer calves, $20 each, express paid in lots of 5; 2 heifer calves with purebred bull calf $75. Grade Holstein cows in carload lots. Wire me to meet you.

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Bull calves sired by King Lyons Cantrilla Pontiac No. 275035, and from dams with good records, calves light in color and priced reasonable. Herd under Federal supervision. Write us your wants, we will give price and pedigree.

R. H. Fleming, Elm Brook Farm, Alba, Pa.

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Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale.

MILLARD E. BASEHOAR, Littlestown, Pa.

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The herd has a strictly business atmosphere and they are bred for maximum production of milk and butterfat. If you admire the look of a producer, they will appeal to you as the premier show type. Our present offering is one choice bull calf from the best blood in the herd and backed by excellent records. Also a couple young cows and heifers. Herd tuberculin tested, no reactors.

CRESTMONT FARM, 31 N. FOURTH ST., SUNBURY, PA

Bradford County, Pa. For more than a quarter of a century this county has been well known throughout America as a center for producing good livestock. Today over 250 breeders are engaged in breeding registered Holsteins, Jerseys, Ayrshire, Guernseys and Milking Shorthorns of such quality and prices as to attract the beginner or the established breeder.

There is now available for immediate sale a limited number of both sexes of the above mentioned breeds. Special Offer Now: Two Registered Holstein bulls, 1 year old, well grown, excellent type. Federal tuberculin tested. A. R. O. records, price $175 each. Address inquiries to

D. K. Sloan, Secretary, Bradford County Livestock Breeders' Association, TOWANDA, PENNA. Office in Court House with County Farm Bureau

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S. C. Leghorns, Reds both combs, White and Barred Rocks, White Wyandottes. Best laying strains in the country. Satisfaction assured. Quality Stock. Farms in Pa. and New Jersey.

Forest Farms, Rockaway, N. J.

PENNA. FARMERS' INSTITUTES

Farmers' Institutes for 1920-21 will start on November 15 and continue until early spring. Three sessions will be held. The program will be continued until early spring.

One day sessions will be the rule this year and the morning sessions will be eliminated as it has been found that the morning attendances are extremely small.

Following is a part of the program as outlined for November and December:

Lackawanna County — Chairman, Horace Seaman, Factoryville, Pa.
Nov. 19—Newton Center.
Nov. 20—Tomkinsville.
Nov. 22—Daleville.

Pike County—Chairman, B. F. Killam, Paupack, Pa.
Nov. 23-24—Green Town.

Wayne County—Chairman, Edw. E. Kinsman, Honesdale, Pa.
Nov. 25—Hamlin.
Nov. 26—Moosic.

Susquehanna County—Chairman, G. W. Bunnell, Meshoppen.
Nov. 27—Uniondale.
Nov. 29—New Milford.
Nov. 30—Montrose.
Dec. 1—Dimock.

Bradford County — Chairman, Oscar M. Ayres, Alba, Pa.
Dec. 2—Rome.
Dec. 3—Sheshequin.
Dec. 4—West Burlington.
Dec. 6—Leroy.

Tioga County—Chairman, Edward E. Marvin, Covington, Pa.
Dec. 7—Mainsburg.
Dec. 8—Jackson Center.
Dec. 9—Osceola.
Dec. 10—Little Marsh.

Luzerne County — Chairman, E. Dana Sutliff, Shickshinny, Pa.
Dec. 13—Conyngham.
Dec. 14—Nescopeck.
Dec. 15—Sweet Valley.
Dec. 16—Dallas.

Cambria County—Chairman, Anselm B. Kirsch, Nicktown, Pa.
Nov. 15—Church Grove.
Nov. 16—Barr Grange Nicktown
Nov. 17—Barr Grange, Nicktown

Jefferson County—Chairman, L. E. Bartlett, Brookville, Pa.
Nov. 18—Frostburg.
Nov. 19—Richardsville.
Nov. 20—Roseville.

Clarion County—Chairman, Henry Tippery, Callensburg, Pa.
Nov. 22—Lickingville.
Nov. 23—Curllsville.
Nov. 24—West Freedom.

BURN OUT WEEDS AND INSECTS BEFORE WINTER

"A general fall clean-up of rubbish and places where rank growths of vegetation are to be found, will go a long way towards freeing the farm of insect pests," according to H. E. Hodgkiss, extension entomologist at the Pennsylvania State College, who recommends such steps before winter sets in field and orchards where fence rows are kept free from dead weeds and grass during the winter months usually suffer much less from insect pests than those of more easygoing neighbors.

The burning off of weeds and other growths where insects are likely to spend their winter or hibernating stage, will increase the mortality of the pests and leave a smaller number to fight in the spring. Stalk borers of potato, grasshoppers and plant lice can be largely controlled by burning fence rows and ditches in and near cultivated fields. It is not only a practice that entomologists advocate, but it is a general "better farming" practice.

SERVICE STATIONS

Pennsylvania

Allentown	Allentown Elec. Devices Co.,	524 Hamilton St.
Altoona	Altoona Stor. Bat. Co.,	800-2 Chestnut Ave
Beaver Falls	Elec. Service Co.,	700 Third Ave
Bradford	Bradford Garage Co,	70 Chestnut St
Butler	Hindman-Dunibaugh Co.,	118 Jackson St.
Chambersb'g	J. G. Schaff Electric Co.	71 No. Main St.
Chester	Thompson's Auto & Supply Co. Inc.	627 Edgemont Ave.
Coatsville	Bonsall & Wilson, First Ave. & Diamond St.	
DuBois	DuBois Garage,	117 So. Broady St.
Easton	Easton Electrical Devices Co.,	52 S. 2nd St.
Erie	LeJeal Cycle & Mobile Works	1721 Sassafras St.
Greensburg	John W. Patton	250 E. Pittsburgh St.
Harrisburg	Arthur P. Meyers,	1303 N. Third St.
Johnstown	Smith's Fireproof Garage,	210 Main St.
Lancaster	Exide Bat. & Ignit. Co.,	115 E. King St.
Lebanon	Lebanon Storage Battery & Magneto Co.	11th & Cumberland Sts.
New Castle	Price Elec. Const. Co.	15 S. Mercer St.
Philadelphia	Motor Parts Co.	1425 N. Broad St.
Pittsburgh	Doubleday-Hill Elect. Co.	5952 Baum Blvd.
Pittsburgh	Doubleday-Hill Elect. Co	719 Liberty Ave.
Pottsville	Elec. Repair Shop, Howard Ave.&Railroad St.	
Reading	Berks Auto Co.	514 Cherry St.
Scranton	Scranton Magneto Sales & Service Co.	521 Mulberry Street.
Shamokin	Shamokin Battery Service,	832 N. 6th St.
Sharon	Sharon Auto Elec. Service	43 Vine St.
Souderton	E. & E. M. Delp, Franklyn & Highland Sts.	
Uniontown	Tri-State Garage Co.	70-6 E. Fayette St.
Wilkes Barre	Johnston Motor Serv. Co.,	45-49 Barney St.
Williamsport	Hazer Wurster Co., W. Third & Hepburn Sts.	
York	P. Y. Burcard,	47-49 Northwest St.

New Jersey

Atlantic City	George Hoefer Co.	1821 Atlantic Ave.
Elizabeth	E. H. Degenring & Co.	35 West Grand St.
Hackensack	Hackensack Mag. & Bat. Sta.,	252 Main St.
Jersey City	Coleman Auto. Elec. Ser. Co.	867 Bergen Ave.
Lakewood	Wallace Bros. Machine Works,	207-9 Monmouth Ave.
Long Branch	H. V. Dorbeck,	611-15 Ocean Ave., W. End
Morristown	Victor A. Wiss & Bros	10-12 Pine St
Newark	Tire Trading Co.	31 William St.
New Brunswick	Middlesex Bat. & Sup. Co.,	19-21 Dennis St.
Paterson	Reliable Magneto Repair Co.	28 Prince St
Plainfield	Laing Mach. Auto Rep. Co.	410 Sycamore St
Red Bank	H. V. Dorbeck	Riverside & W. Front Sts
Trenton	J. H. Hearnen	105-7 S. Warren St.

New York

New York	Amer. Bosch Mag. Corp.	223 W. 46th St.

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The stalling of your motor car may cause inconvenience, but the stalling of your motor truck causes actual financial loss.

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PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880
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Home Curing Pork Products

Directions for Preserving Pork for Home Use by Various Methods

By PROF. W. H. TOMHAVE
STATE COLLEGE PA.

As soon as the pork carcass has been cut into pieces for the pork barrel, it should be prepared for the curing process. The object of curing the meat is to preserve it for future use; otherwise it would necessitate the use of all the meat as a fresh product. An effort should be made to cure the meat in such a manner that it will remain palatable and retain and even improve its flavor. Pork lends itself more readily to curing than other kinds of meat on account of the large amount of fat which does not harden to any great extent while passing thru the curing process. The pieces selected for curing should consist of the shoulders, hams and bacon strips. The loin and trimmings do not come thru the curing process in very good shape.

There are a number of ingredients that may be used for curing pork. Many of them are used to add flavor to the meat, or in some cases to hasten the curing process. Salt is the most common of all the ingredients used. It has an astringent effect on the meat and is a strong preservative. Meat can be cured by the use of salt alone but when cured in this manner it does not come out of the cure in as palatable a condition as salt has a tendency to harden the muscle fiber. Sugar or molasses is frequently used to counteract the hardening effect of the salt and to add flavor to the meat. They also have a limited preserving effect on the meat. Salt peter is used in limited amounts. It has a preservative effect but is chiefly used to retain the natural color of the meat which is destroyed by the action of the salt.

Methods

There are two general methods of curing meat: brine curing, and dry curing. Both of these methods will give good results and the one to follow will depend upon the personal preference of those using it.

Equipment

Vessels of some kind must be provided to hold the meat if the brine curing process is practiced. The size of these will depend upon the amount of meat to be cured. Earthen crocks or jars may be used, but they are usually too expensive and there is also danger of breaking them when handling. Light hardwood barrels are best suited for home use. These can be purchased as new barrels, or liquor, kerosene or vinegar barrels may be used, but should be burned out before using. Molasses barrels may be used, but must be scalded before using.

Sugar Cured Pork

The meat should always be thoroly cooled before being put into the curing vessel. It is essential that all cuts be neatly trimmed and all scrag ends removed. The hams, bacon, and shoulders should be thoroly rubbed with salt, and allowed to remain on a bench or table over night. The next day the meat is packed into a vessel with the hams on the bottom and the bacon pieces on top. For each one hundred pounds of meat, weigh out from eight to ten pounds of common barrel salt, two pounds of brown sugar, and two ounces of saltpeter. These ingredients are thoroly mixed and dissolved in four gallons of boiling water. The solution is allowed to cool, after which it is poured over the meat. All the meat in the barrel should be covered with brine. If the water used in making the brine is not sufficient, add enough to cover all pieces. The meat must be weighted down with a clean round board cover and stones. Iron should not be used to weight the meat, as the salt will have a tendency to rust it. The vessel should be put in some cool place. If it should begin to show signs of fermenting or spoiling, remove the brine, boil it and pour it back over the meat.

For Good Products Hogs Should Receive Good Feed and Good Care

The bacon strips may be taken out of the brine at the end of five weeks; the hams and shoulders should be left in the brine from six to seven weeks. The bacon may be left in the same length of time without doing it harm.

Dry Curing

Dry cured pork requires the same ingredients as used in the brine but they are used in different proportions. There is more labor connected with this method of curing. When the dry mixture is used, it must be applied at different intervals, while when the pork is brine-cured, the solution is poured over the meat and allowed to stand until ready for the smoke house.

For the dry-curing, weigh out from five to six pounds of common barrel salt, two and a half pounds of brown or granulated sugar, and two ounces of salt peter. This amount is for 100 pounds of meat. These are thoroly mixed. This mixture is divided into three equal parts. One part is used to rub over the meat, after which it is packed in a vessel or put in a meat trough or on a bench. At the end of three or four days, rub the meat again with a portion of the mixture. At the end of another three or four days' period, rub the meat with the balance of the mixture. Again repack it in the vessel or trough and allow it to remain for from two to three weeks. It may be cured in a shorter time, but it is well to allow a little more time.

Plain Salt Pork

Each piece of meat is rubbed thoroly with fine barrel salt before it is packed in a barrel or vessel of some kind. For each hundred pounds of meat, weigh out ten pounds of salt and two ounces of salt peter. Dissolve these in four gallons of boiling water which is poured over the meat after it is cooled. The pork will be ready to be used at the end of three weeks but should be left in the brine until used. The meat may be cured by the dry salt process also. The meat is packed in a barrel or vessel the same as when brine cured, and a mixture of ten pounds of salt and two ounces of salt peter is packed around each hundred pounds of meat. It is left in this dry salt until used.

POTATOES FOR SHOWS

No tuber should show any evidence of [illegible]. The skin should be bright, clean and free from [illegible] and mechanical injury. The flesh should be clean, white [illegible] when cut [illegible]. The eyes should be shallow and few [illegible]. The standards vary somewhat according to [illegible]. A standard [illegible] potato is roundish with [illegible] ends, and weighs from seven to eight [illegible]

Neighborhood Lighting of Rural Homes

How One Community Organized to Use a Commercial Plant

By W. F. HILL

Past Master Pennsylvania State Grange

The co-operative plan for securing electric power and light from a central station for a farm neighborhood as referred to in a recent article of mine in The Pennsylvania Farmer, and as worked out here near Huntingdon, Pa., has elicited so many inquiries that I have felt impelled to set forth in detail our method of procedure. In so doing I do not mean to imply that our plan is the best. There probably are others as good, or better, but this we do know: that so far results are perfectly satisfactory in every respect. For years we have wanted electric power and light in our neighborhood but the central companies always declined to build a line for us, saying that it would cost $2000 per mile, and that it would never pay.

To get both power and light we determined it was up to us to take the bull by the horns and connect up with a central power plant, as they were ready to sell us current if we would take it. After having a couple of neighborhood meetings, attended by everybody living along the proposed line, six real estate owners signed the following agreement:

"We, the subscribers hereto, hereby agree each with the other to associate ourselves together for the purpose of building an electric line to distribute light and power to our various residences. To effect this purpose we individually and collectively agree to the following conditions:

"First. To accept and abide by the will of the majority. Second. To grant to the company, without recourse, the right of way for the line during the lifetime of this agreement; and also the right of ingress and egress when necessary for the purpose of setting poles, stringing wire, or for other purposes during the building of the line or any part of the line. It is agreed that such right of way is to be only along boundary, road or other fence lines and that the poles must be set close to the said line. Poles may not be set in a driveway, nor immediately in front of a barn, or a house, in a way that shall be injurious to any subscriber-owner below.

"Third. Each subscriber shall contribute an equal quota or amount with every other subscriber. Contributions shall consist of material, service or cash. So far as possible and practicable, the necessary materials and labor are to be secured from among the subscribers hereto, the Company reserving the right to assign the furnishing of materials and service among its membership and to fix the compensation therefore, crediting the subscriber with this amount upon his quota."

One of the subscribers was then appointed Trustee and empowered to represent the Company in securing right of way and directed to sign the right of way forms as "Trustee." This he did turning them over to the company afterward. The right of way form was copied from the one in use by The Raystown Water Power Co., over the large field where it has been operating successfully for a number of years, and is as follows:

"Agreement made this..........day of September, 1919, by and between..................of the Township of ....County of Huntingdon, State of Pennsylvania, party of the first part and ....Trustee, party of the second part:

Witnesseth: That the party of the first part hereby grants to the party of the second part the right to erect and maintain a line of poles and wires for the transmission of electricity over and across the lands of the party of the first part in .... Township and to be located along the inside line of the State Road running between Huntingdon and McConnelstown, as close to the line as is feasible.

In consideration whereof the party of the second part agrees to pay the party of the first part, the sum of one dollar the receipt of which is hereby acknowledged.

First. The party of the second part shall have the right to cut trees or remove branches that grow close to or endanger the transmission line.

Second. The party of the second part shall have the right to send employees along said line to repair and inspect the same.

Third. The party of the first part shall otherwise have full control and use of all the land along and under said line.

Party of first part......................Seal,
Party of the second part............Trustee,
Seal.

When all the right of ways had been secured advertisements were inserted in the local newspapers asking for bids for the furnishing of poles with a seven and one-half inch diameter at the top, thirty feet long. Estimating 35 poles per mile, we needed 102 poles, which is three poles less than three miles. The poles were of chestnut, peeled, roofed at the top and cost us $3.00 apiece ($306.00) delivered along the line.

The building of the line was done on contract, and including the cutting of trees and trimming of branches, cost $460.00. The anchor posts—or blocks—were put down four feet and the main poles five feet in the ground, and firmly tamped. While a few six pin crossarms were used yet for the most part a recently patented three-point metal bracket—that sets right over the roof shaped pole top—was used to carry the three No. 8 bare copper wires. The brackets are cheaper and give more space between the wires than crossarms, and are expected to last longer. These brackets cost us fifty-two cents each while we paid seventy-five cents for what crossarms we had to have. The law requires the use of crossarms in certain conditions. Where the line crossed a long distance telephone line, double wooden crossarms were used on each side of that line—and that company was duly notified that an electric line would be built crossing over their wires at least four feet above them. Our wires paralleled another phone line for some distance but wires were kept four or more feet apart and no perceptible effect can be noticed on the phone service. Two thousand, six hundred and seventy-one pounds of bare copper wire No. 8 were used, and cost at that time, 28.54 cents per lb., delivered here.

As this line was to carry the same voltage as the wires in town, transformers were necessary to step it down from 2300 to 110 volts. Our six houses divided up nicely into three groups of two houses each that were close enough together so that only three transformers were needed and these of this size and capacity cost us $75 each. Then lightning arresters to place at each side of each transformer (six of them) was $33 more. A house meter, at a cost of $8.80, was bought by the company for each house. A powder plant in the county that was being dismantled enabled us to get some equipment cheaper than otherwise, and the central power company also helped us in buying. A few other incidentals bring the total cost of this main line up to $2000.

Each subscriber bears the expense of wiring his own house and barn and connecting with the main line, as this is a matter of individuality. We pay four and one-half cents per k. w. for the current metered where our line joins the city line. The last day of each month one of our young men reads the meter in each subscribers' home and each one pays him for his proportion of current consumed. There is some loss along our line, no doubt, but as yet the central company has not installed a meter at the junction of the lines and we have been paying them for the total used as read from our residence meters. In order to give us this reduced rate—one-half that charged in the town, the central company filed a special schedule with the Public Service Commission. The line was substantially built and should be good for 15 years, we estimate, with practically no attention. Three wires were installed because we wanted plenty of power and doubtless this fall in silo filling and threshing time, we will have a motor and a meter mounted on a portable truck and take it from barn to barn to run machines. One subscriber also intends to operate his sawmill from it. Two wires woul be sufficient for light alone but when a line being built the addition of the third wire ad but little to the total cost and gives ample equi ment. Number 8 wire is about two-thirds larg than Number 10, reduces the loss and gives mo satisfactory service, and should we have oc sion to either extend the length of the line, o make heavier use of it, the foundation is alread provided. The transformers that we have wi handle three properties each, altho now we u them for but two apiece. As the voltage on t wires from the transformers to the houses is r duced to 110 volts there is a greater loss i these wires, so it is best that these seconda wires should not have to extend too far aw from the transformer.

Perhaps a dozen men have written me to i quire whether it is either necessary or advisab to incorporate. When we started on this proje we rather felt that it would be the part of wi dom to incorporate and thought that we cou do so under the law passed at the last sessi of the Legislature. Our inquiry as to wheth we could do so seemed to be the first one alo that line and was referred to the Attorney Ge eral's Department for a ruling. Their opini was to the effect that that Department did n believe a company for distributing electric cu rent to farmers, was entitled to the benefit that law. An attorney informed us that to i corporate under other laws we would have have capital stock of not less than $5000 a that the expense of getting a charter, togeth with the state tax would not be less than $10 that there would be state reports to make each year and state taxes to pay. Then in th chaotic times the Federal Government would requiring reports and data that, added togeth was likely to make life burdensome. So we dro ped all thought of incorporating and up to t time have discovered no reason at all why did not act wisely.

Our right of way is altogether on priv lands. We cross a State highway a number times but the poles are set on private land a no net is required to be stretched under the wi Having no charter, a chance is taken that a pr erty owner along the line may refuse to let y build on his property. One farmer did refuse

We invited him to join with us on eq temrs in the ownership of the line, urged h in every way that we could but he would neit join us in building it, nor permit us to build o his land So we were forced to build around h This line was built co-operatively. Eve along its route was invited to join in, hel it and share equally in its benefits. It w built for profit, but for neighborhood impro ment. Its success has already stimulated two other communities to institute movem get electricity. One of these communities ceeding along the same lines that we di on a larger scale As they are preparing vide for carrying current from the same company for a much longer distance and ply a small village, it is more than likel they will find it expedient to incorporate other community wanting light and powe ligating itself to buy several thousand worth of bonds of the central company a central company will then build, mainta own the line In each instance the centr pany is the Raystown Water Co., Huntingd and the secretary of that company, who i spirited man and well posted, tells me that readers of The Pennsylvania Farmer desi technical information further than is co in this, and my previous articles, if th write him he will reply. I suggest that close a self-addressed stamped envelope.

I have received a large number of lette this and other states where farmers sa have wanted the benefits of electricity fo and light for years but the companies i nearby towns will not build out into the saying it will not pay them. The above give hundreds of farmers, who live not away from a central station, clear idea how themselves and neighbors can co-oper bring electricity right to their homes

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Soils and Fertilizers

Conducted by Dr. J. G. Lipman

Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

FERTILITY PROBLEMS

Composting

"What are the advantages of composing stable manure? Is there any plant food lost?"
E. T. ., Cecil County, Md.

The composting of stable manure may be desirable for a number of reasons. Where very large quantities of manure are used, the decomposition of the straw and of the other coarse portions of the manure may not proceed fast enough. It is well known that, under those conditions, there is a so-called "burning" effect. Hence, it is much better to compost the manure, that is, let it decompose partly before it is applied to the soil.

The composting of manure may be desirable where it is intended to increase the supply of it by mixing the manure itself with weeds, peat and other refuse material. Farmers of a generation or two ago, who had not access to commercial fertilizer, had to depend largely on manure and composts for maintaining the fertility of their soils. It was the practice in those days to compost manure with peat or muck. S. W. Johnson, in his "Muck Book," published about the middle of the last century, records numerous practical observations on methods of preparing composts. He points out that very often one load of rich manure mixed with three to four loads of peat or muck produced material which, load for load, was as effective as manure itself in promoting the growth of crops. In the Far East it is the customary thing for farmers to compost waste materials of all sorts, green clover and mud from the bottom of canals and convert everything into a valuable fertilizer.

In regions where rain fall is deficient the use of fresh manure is undesirable because of its drying effect on the soil. Hence, under those conditions, it is better to compost the material, that is to let it shrink in volume and change in composition, before it is applied to the soil. This is a common practice in arid and semi-arid regions where manure is used more or less regularly.

Where the special advtanges noted above are not anticipated, the composting of manure is likely to be unprofitable. Proper composting involves not only a considerable expenditure of labor, but also the loss of more or less plant food. Where the composting is not properly done the loss of plant food may be very considerable. Numerous experiments in Germany and England show that 100 pounds of fresh manure will be reduced to 80 pounds when the straw is about half rotted. The loss may be as high as 40 per cent when the manure becomes fat or "cheesey." When it becomes quite well decomposed it will be reduced to about half its bulk and will have lost about half of its original substance. When the composts heaps are kept under cover the loss falls entirely on the nitrogen in the manure. Most of the nitrogen passes off into the air in the form of ammonia or nitrogen gas. Where the manure is kept in the open much of the soluble potash and also some of the soluble nitrogen is leached out and carried away in the drainage. This is aside from the nitrogen lost in the form of gases from the compost heap. Dr. M. A. Schutt, of the Canadian Department of Agriculture, reports some experiments which bring out the extent of the loss of plant food from manure during the composting process. His results are herewith given:

	Loss at end of 6 Months (Percentage) Prot'd.	Loss at end of 6 Months (Percentage) Exp'd.	Loss at end of 12 Months (Percentage) Prot'd.	Loss at end of 12 Months (Percentage) Exp'd
Loss of organic matter	58	65	60	69
" nitrogen	19	30	23	40
" phosphoric acid	0	12	4	16
" potash	3	29	3	36

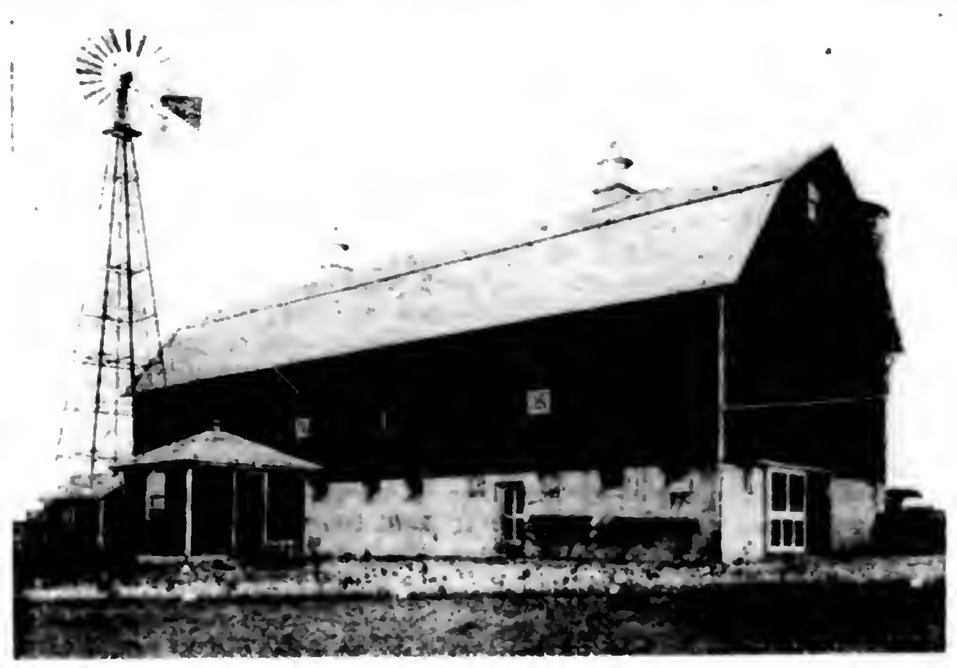
Another point to be noted in favor of composting is that during the composting process the nature of the bacteria and of other microscopic organisms is very materially changed. In well-rotted manure there are large numbers of bacteria responsible for the production of nitrates. Such well-rotted manure, when added to the soil inoculates it with large quantities of desirable bacteria. The effect of such inoculation is the production of larger quantities of nitrates and of other valuable plant food. This is particularly valuable in the early season when the bacterial processes in the soil are retarded by the low temperature. Every good gardener knows that well-rotted manure has the ability to stimulate the early growth of his plants. The inoculating effect of the manure added, as well as the available plant food furnished, is responsible for the results.

Muck Soil

"I have a piece of drained muck soil, black as your hat and looks rich. It is full of humus but things do not grow well. Very few seeds or grains develop and the foliage often turns yellow.
T. O. M., Tioga County, Pa.

Farm Buildings and Pasture of a Western New York Farm

Assuming that the muck soil is well drained, it is apparently lacking in lime and in potash. The lack of lime is indicated by the fact that "the foliage often turns yellow," while the lack of potash is shown by the fact that "very few seeds or grains develop." It would be advisable to lime this land, using ground limestone at the rate of two to four tons per acre. Potash should be applied at the rate of 75 to 150 pounds of actual potash per acre depending on the crop grown. The potash may be derived from Kainit, double manure salts or muriate of potash. The first of these contains about 12 to 15 per cent of potash; the second about 20 to 25 per cent of potash, and the last named about 50 per cent of potash.



Dairy Barn With Hay Loft Above

Raw vs. Treated Rock

"I see a statement made by a raw products company that the chief value of treating ground phosphate rock with sulphuric acid in the manufacture of acid phosphate comes from its action in making it exceedingly fine. Is this true? If so, would not raw rock be as good and available if it could be ground fine enough?
T. L. B., Bucks County, Pa.

It is the purpose of the manufacturer of acid phosphate to produce so-called available phosphoric acid. The average acid phosphate found on the market contains 14 to 16 per cent of phosphoric acid, practically all of it in water-soluble form. Many experiments have been made to compare the value of water-soluble and so-called reverted phosphoric acid. The last named is not readily soluble in water, but is soluble in citrate of ammonia, the reagent used by chemists for measuring in the laboratory the availability of phosphoric acid. A solution of water-soluble phosphate to which finely divided limestone is added will give rise to the formation of a sediment containing reverted phosphate. Such reverted phosphate compared in field tests with water-soluble phosphate gives practically as good results. On the other hand, finely ground phosphate rock does not, under average conditions, give as good results as water-soluble phosphate or as reverted phosphate. Chemists attempt to explain the difference in results obtained by the fact that, when phosphate applied to the soil in soluble form is made insoluble, it is distributed in so very minute particles as to allow the latter to become dissolved easily in the soil water. Hence, it is quite proper to ask the question whether it would not be possible to grind phosphate rock so fine as to have exceptionally minute particles which would readily dissolve in the soil moisture. Theoretically, this is possible; practically, it would be too expensive.

Hence, it seems cheaper at present to treat phosphate rock with sulfuric acid, or in some other way, to obtain the desired results. One method, suggested by the writer, consists of mixing inoculated sulfur with ground phosphate rock. The particles of inoculated sulfur are changed by the bacteria into sulfuric acid which, when in close contact with the particles of phosphate rock, will make the latter available to the growing crop. A number of field experiments carried out by the writer within the present season seem to indicate that mixtures of inoculated sulfur and ground phosphate rock may in time become a very good substitute for acid phosphate.—J. G. Lipman.

CANADIAN FARM LAND VALUES

The Dominion Bureau of Statistics recently published its estimates of the average value of farm lands in Canada, the wages of farm help, and the value of farm live stock, wool, etc., during 1919. The bureau places the average value of farm land for the Dominion, including improved and unimproved lands, together with the value of dwellings and other farm buildings, at $52 an acre, against $46 last year, $44 in 1917, $41 in 1916, $40 in 1915, $38 in 1914 and $37 in 1910. This shows an increase in value of farm lands of $14, or 36.8 per cent, in five years.

The average wages paid for farm help in 1919 show considerable increase compared with the previous year. For Canada as a whole the wages paid during summer for males, inclusive of board, is $78, and for female $43 a month; the value of board is $24 a month for males and $19 for females. In 1918 the cost of farm help during summer months was estimated, for males at $70, including $21 a month for board, and for females at $38 a month, including $17 a month for board.

The value is highest in British Columbia, being $174, as compared with $149 in 1917 and 1918. Ontario with an estimated average value of $66 an acre and Quebec with $72 are above the average for the Dominion; in 1918 the average for both Ontario and Quebec was $57 an acre and in Manitoba from $29 to $32 in 1918.

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OUR JOB is to serve our readers. Whenever you are puzzled, write to us and we will help you if we can.
—The Editors.

State Fair Sentiment Grows

IT IS gratifying to note the number of farmers' publications which urge the establishment of a state fair in Pennsylvania. "Grange News," "Milk Producers' Review," and "National Stockman and Farmer" have all given hearty endorsement to the idea. What is needed now is for farmers' organizations to pass resolutions demanding a real agricultural fair for this state and the purpose can be realized.

The appropriation necessary should not be looked upon as an expense, but as an investment. We do not believe that the state could invest money in anything that would bring larger returns than would the right kind of a state fair, properly managed. Such an institution is a logical climax to the many agricultural activities and organizations in the state and would furnish the needed opportunity for all to come together and to bring the various products of farm, herd, garden, orchard and household where the public could see the real size of agriculture in this state and be properly influenced by it.

Boost the state fair idea.

Be Constructive

THERE NEVER was a greater need for thoughtful, concerted action by all groups of people than now. The reorganization of business upon a peace basis, the passing of the administration of government from one party to another, the enactment of new laws to meet new conditions, the establishment of new standards, prices and wages all calls for the greatest wisdom and the widest charity. No time should be wasted in fruitless fault-finding which only tends to accentuate class feeling and opposition.

A large number of farmers' meetings of various kinds will meet during the winter. The leaders should make a special effort to direct the discussions and resolutions along lines that will help to clarify thought and lead to just and intelligent conclusions. Many proposed changes will be presented to Congress and the Legislatures this winter, many of which will have a decided bearing upon agriculture and farmers should be ready with helpful criticisms and suggestions. It is making a mighty poor use of an opportunity to do nothing but oppose what others propose. It is equally foolish to reject the suggestions of others simply because they are made by those who are not actively engaged in our business. Farmers' organizations have sometimes been criticised and have failed to influence because their actions have frequently been entirely negative rather than positive in their demand for concrete objects.

The different state granges, the annual meetings of the several state organizations, and other bodies, may render their business and the country a real service if the members will put their heads together and lay some really constructive plans for their coming meetings and resolve that no time shall be worse than wasted in harmful bickerings and destructive criticism.

Business Conditions

IF ONE may rely upon the so-called "high authorities" in the business there is little cause for alarm concerning the future of business conditions. For the time being, there is more or less uncertainty and hesitation. Production in some lines is reduced and in some instances shut down entirely. Prices continue to tumble and, as is natural during such a period, people are losing money—at least anticipated money. In some trades wages have been reduced—especially in textile mills and shoe factories. The reductions were accepted rather than experience a necessary shutdown. Farm products, after their swift toboggan ride, are now moving along on the level. Producers, manufacturers and dealers in every line have tried their best to prevent a slump in their particular lines, but few, except those whose price or income was fixed and guaranteed by law, have been able to stay the downward movement. The isolated cases give rise to the natural question: "Is it right to guarantee returns to any special class?"

The encouraging and optimistic spirit prevailing among men who ought to know is opportune now. Smaller men are encouraged to go ahead, and when this tendency prevails there is little cause for fear. There is plenty of cash in this country, there is no over production and there is no apparent reason why business will not move along briskly just as soon as all feel assured that prices have reached a stable basis. They who are holding on for war-time prices have a jolt coming to them.

Farm Bureau Service

THOSE who are desirous of learning something of the activities of the Farm Bureaus in Pennsylvania should send for Extension Circular No. 83, Pennsylvania State College, State College, Pa. This bulletin of 58 pages gives a brief summary of what was done during the past year and will be an eye-opener to those not acquainted with the work of the Extension Department, and to those who may think the service is not valuable. The time has gone by when the charge can be made that the County Agent's work is not a necessary part of agricultural development. It is no longer possible to farm successfully by rule-of-thumb methods, but modern farming demands the application of scientific principles as fast as they are proven worthy of adoption. There is no better or more economical method of extending them from the laboratory and experimental farms to the practical farm than the Extension Service thru the County Agent.

Whatever may have been the original intent, or however some may believe that the service was established to increase production only, an acquaintance with the real work accomplished and in progress will convince anyone that it means far more than increasing volume of production alone. An examination of the Circular referred to shows that the work in Pennsylvania (commonly called "projections") includes economy of production, efficient production, home improvement, co-operative work, business organization, assistance to social and educational improvement work, enlisting the interest of boys and girls in farming, and other equally important activities.

The Editor of Pennsylvania Farmer has attended a few of the many experiments which are a part of the extension work and has seen enough of the plan and purposes to say without qualification that the results of such work, whether it be on spraying, varietal tests, liming, fertilizers or animal breeding, furnish information which it is impractical if not impossible for individual farmers to acquire otherwise.

An examination of the figures shows that 58 of the 67 counties of the state are organized and operating; four others are organizing and considering organization, leaving only five in which no move has been made. The Smith-Lever Law of 1914 provides for a graduated appropriation, increasing until 1922. Pennsylvania has so far met its proportion each year. The amount which the coming Legislature will be asked to appropriate for the coming two years is $500,000. Unlike many other states Pennsylvania was not organized on the membership basis and no income is derived from that source.

As to commercial activities, the principle which the leaders in this state have adopted is that the County Agent and the service in general will render all assistance possible to any legitimate, organized effort, but that actual business organizations should be formed and conducted by the people engaged in the different lines of production. We believe this is a right attitude. The kind of business organization now most needed is what is called "commodity organizations;" by this is meant the association of farmers engaged in similar production, rather than try to form one organization for use of all. The Extension Service can be called upon for information and assistance by all such business bodies. This explanation may help to explain to inquirers why Pennsylvania has not as yet joined in the National Federation movement.

The Extension Service is here to stay and it is only playing the part of wisdom to assist in making it work to the fullest capacity. Wherever it is failing to do so it will be found that the people are at fault in not doing their part.

Our Washington Letter

If the plans of the promoters materialize, the farm folks thruout the nation will soon be given an opportunity to join one more organization for their uplift and social betterment. A citizenship club movement is being launched from Washington, organized on the principle of that "education is founded on a democratic basis of activity."

According to Dr. H. E. Jackson of the National Community Board, the new organization is to include in its membership all the citizens of the community. Farmers, bankers, dealers and all others will come together in one community of interests. "The public school is the only democratic institution in the United States," says Dr. Jackson. It is proposed to develop the public schools into a people's university! to make them training schools for the tasks of life, and every public school a community center, an open forum for the discussion of all community and public problems. All questions are to be approached from the standpoint of the citizen, not of the farmer, the banker or the dealer.

One of the objects of this organization is to bring the people into the right spiritual attitude toward one another. It is also designed to develop some system of farming and banking co-operation whereby the farmers will be able to make their own savings the basis of their own credit.

It is probable that much will be heard of this movement during the coming months. There is no question as to the goodness of its aims and program, but some doubts are heard as to whether the farm folks will stand for any more organiaztions.

* * *

Still another movement closely related to rural community and farm life, already organized and under way, has established its headquarters in Washington. This is the National Visual Education Association. It plans however, to secure its support from congressional, state and county appropriations rather than directly from the farmers.

The object of this association is to secure, thru Congress, appropriations and suitable laws and regulations, to pay one-half of all necessary expense of supplying and installing moving picture machines, films and books of instruction in any and all of the 17,000 grade and high school buildings of the country, where the state, district or county provides for the remaining half of the expense, and to make such buildings and picture apparatus open and free at all times when not in use by the schools, for the use of civic, commercial, industrial, patriotic and social organizations.

"Moving pictures skillfully used by county agents of agriculture," argues the promoters of this scheme, "could accomplish more than any other agency to interest, enthuse and instruct producers of food and clothing. Some agricultural stations have shown a heavy annual loss in our yields of corn and other crops because of carelessness or lack of knowledge in the proper selection and care of seed corn; also in the treatment of seed potatoes for scab, oats for smut, the grading of seed wheat, etc., while the Scientific American has shown large gains in yields have been subjected to an electric bath before planting. Here is an opportunity to impress all these

valuable lessons more strongly than ever with suitable talks and pictures."

It is figured that the total cost to the government of equipping the 17,000 schools in five years would be around $25,000,000. It is also estimated that $50,000 judiciously expended in calling the attention of Senators and Congressmen and state legislators to this movement will be sufficient to convince them of the necessity of providing the needed appropriations.

* * *

The marketing of farm products will receive much attention in Congress this winter, judging from the attention it is now receiving from Senators and Congressmen returning to Washington for the coming session. Senator Albert B. Cummins of Iowa, chairman of the Interstate Commerce Committee, says that efforts will be made to secure enactment of a law providing for "a real marketing system which will take the farmers and consumers out from the grip of the middlemen and the interests which are now mulcting both producers and consumers." The Capper-Volstead bill will undoubtedly be one of the first steps toward the accomplishment of better marketing conditions.

* * *

Reports from reserve bank agents to the Federal Reserve Board indicate that the slump in prices of farm products is beginning to be seriously felt in all lines of trade and industry in anyway affected by the purchasing capacity of the farmers. This is especially true as regards trade in the South and West. Farmers have curtailed buying, and this trade slackening is reacting upon retailers in farming regions, and in turn upon wholesalers, railroads and manufacturers. The result is reduced employment of labor on the railroads, in mines and in industrial plants. The people of the cities are beginning to realize as never before their dependence upon the farmers.

* * *

A tariff on Canadian wheat will be demanded of the next Congress. It is announced by Senator Curtis of Kansas, that a conference of delegations from the wheat growing states will be held soon to decide upon a plan of action and the rate of duty which should be imposed. It is said that hearings on the wheat tariff will be held before the Ways and Means and Finance Committees at an early date. Danish butter, frozen meats from Australia, corn from Argentina and vegetable oils from the Orient will also be included in the products on which a tariff will be demanded sufficient to protect the American farmers.

The old land development scheme under the guise of a soldiers' land settlement and bonus measure, will be up for action early this session. Senator Borah has a new plan which he will introduce in December and which it is claimed meets with the approval of Senator Smoot's Public Lands Committee. It provides for an appropriation of $300,000,000 to be utilized in aiding veterans to purchase farms or homes, including the reclamation of swamps and deserts.

The farmers' organizations, by their prompt action, last year, defeated the Mondell Land Settlement bill, but it is apparent that they will be compelled to put up a harder fight this winter to down its successor. They can advance the uncontrovertabe argument, however, that as the farmers have raised this year vastly more foodstuffs than the market demands at a cost of production price, there is no need for the opening up of more new lands at this time.—Elmer E. Reynolds.

HARRISBURG LETTER

Preparing a Program.—Developments of the last week indicate the next Legislature of Pennsylvania, which will meet in the first week of January, will not only be called upon to carry out constitutional mandates, but to work on a program including a date for adjournment set when it meets and not dependant upon the progress of legislation affecting only one section of the state or any single interest. As over half of the men who sat in the last House will be here again any efforts to hold the lawmakers in session as was done last session will be resented out of memory of the high cost of living encountered in 1919 if nothing else. The Governor is planning a notable message which will include liberal appropriations with considerable broadening of educational laws so that the building up of the school system may be adequately financed and the teachers helped; expansion of the health and welfare laws which may lead to a change in the present system of medical inspection in favor of medical supervision; more funds for agricultural survey and research work and reapportionment. The codification of laws is to be pushed forward. Reapportionment is made a duty of the Legislature and has been ignored since the special session of 1906. The Governor says it will be carried out next year and studies have already been started by some citizens interested in making district lines.

The State Revenues.—The men guiding legislative affairs are going to be more generous with the people's money next session in regard to schools than ever before, the primary reason being that the State Administration wants to make a monument of school reorganization and another is that it is good politics when about a million women now have the right to vote and would be apt to express themselves. The prospects of a greater share of the millions being taken for schools with more money for roads, reforestation, agriculture and state governmental expenses is causing some of the people interested in hospitals that ought to be better supported at home to look over the land. The charities are going to make a fight for more money and all sorts of combinations to get it may be expected. The possibility of starting a policy to reduce the grants to institutions not under state control and which ought to get more money from the communities they benefit has been seriously discussed at the Capitol and there is little doubt but what the time is thought opportune, but as to making a start opinions are not unanimous.

Bucking the Snow.—The State Highway Department had a chance this week to demonstrate what it can do in regard to moving snow. The sudden fall enabled the department to mobilize forces for battling with snow in what is considered excellent time and twelve-inch snows were encountered in mountain counties on both the northern and southern tiers. The state plans to keep the main highways open all year and has profited by experiences of two terrible winters and been aided by unprecedented payments of automobile licenses, all devoted to road maintenance.

Pinchot Gets Busy.—Commissioner of Forestry Gifford Pinchot is getting busy in regard to forest purchases and has addressed all of the members of the Legislature on the subject, showing them in dollars and cents what the lack of timber in Pennsylvania is costing Pennsylvania and asking for generous appropriatios to buy waste land and reforest it for benefit of posterity, especially in regard to water supply and school funds. The commissioner has been fortunate this year in a low forest fire rate which has enabled the organization of fire fighting forces to be pushed. Mr. Pinchot has asked the legislators to line up for the Sproul program.

Asking About Automobiles and Trucks.—The State Department of Agriculture's statistical branch is about to take a census of the motor vehicles owned on Pennsylvania farms. It is believed the gain over last year will be heavy and that a big increase in the trucks used will also be shown. The figures on tractors in use on the farms of the state, just printed, show a surprising increase, there being 6,800 on something like 700 townships against 4,300 tractors on practically all of the farms a year or so ago. The labor situation is declared to be responsible for the heavy investments by farmers in motor vehicles. At the same time some districts show gains in horses and mules.

The Farm Products Show.—The committee in charge of the big midwinter farm products show at its recent meeting opened the corn competition to the nation and outlined liberal plans. It is expected the corn and apple exhibits will be something far greater than ever known and it is hoped to get good exhibits of various fruits and vegetables which have been put in storage. Ten organizations are to meet here during the show and the Legislature will also be in session and in its most impressionable mood.

Back Up the Yellows Campaign.—Letters received by Dr. J. G. Sanders, the state's plant industry chief, tell of pronounced interest in the plans to bring about eradication of peach yellows, which have also been attacking plum trees. State supervision, along lines adopted in regard to other fruits is generally suggested and an appropriation will likely be asked so that some practical results can be obtained in peach growing districts to demonstrate the importance of acting promptly.—Hamilton, Harrisburg, Nov. 22, 1920.

NEW YORK LETTER

Secretary of Education.—Friends of Mrs. Florence E. Smith-Knapp, of Syracuse, are urging her as a candidate for the proposed post of Secretary of Education. The women of the state are urgent in their support of consolidating the supervision of all government educational work as being more economical.

Industries Decreasing.—The number of unemployed men of the state increases daily, the decrease of the industries being 9 per cent beyond seasonal decreases. Farm operations are handicapped more proportionally than any other lines because of decreases in farm prices.

Acute Coal Shortage.—Centrally located cities and towns of New York are alarmed over the continued coal shortage. Portland faces the winter with absolutely no coal to be had while others are in the same predicament. The close of the navigation season is expected to help state consumers somewhat as shipments of coal to remote towns and to Canada have taken the supply on hand. Citizens clubs are taking the matter up with coal producing companies.

Cold Wave.—Extreme cold, snow and wind marked the close of an unusually mild fall. It came so suddenly that live stock was caught out. About one-third of the cabbage crop was frozen in the fields for want of help, and thousands of bushels of apples will result the same, as cider mills have closed down earlier.

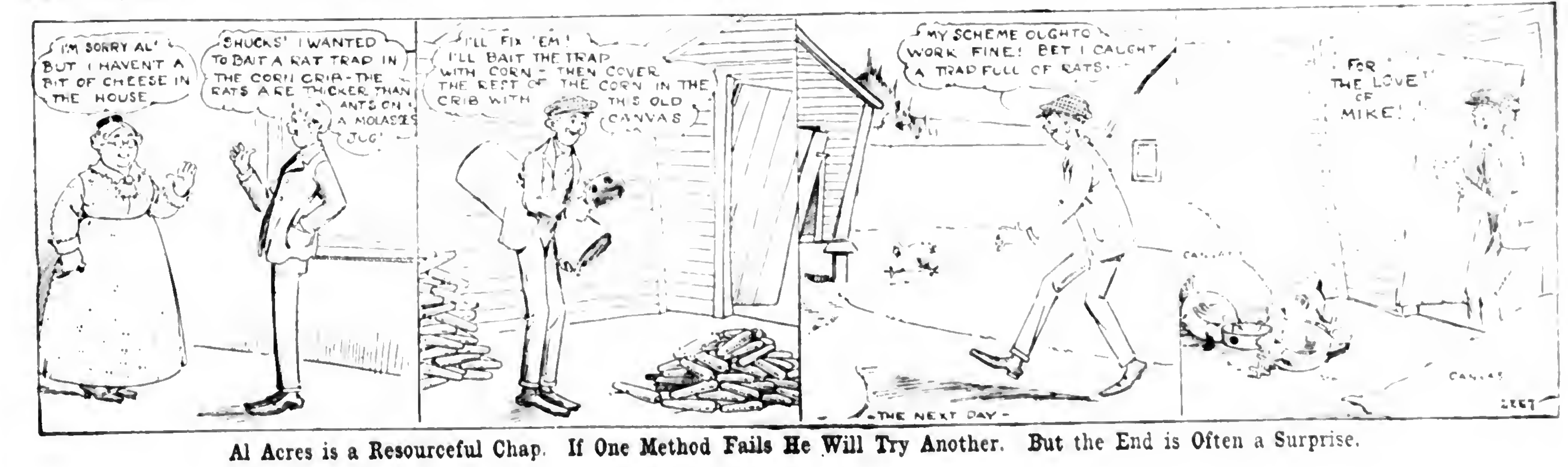
Cabbage Situation.—Cortland and Onondaga Counties are the heaviest producers of cabbage in the state and probably in the Union. By means of farmers' co-operative organizations $8 to $12 a ton is being offered, with local buyers paying $7. This time last year the price was $24 to $35, and the expense of growing has been even higher this year. Freezing may have reduced the supply so the price of late stock may be higher. Growers in general will not profit on the crop this year, instead many will suffer losses. The crop is as large again as that of 1919, with an average of 15 to 25 tons per acre.

Butter and Cheese Firm.—Best grades of butter are in better demand, with prices firm. Unskilled butter makers, whose milk market was lost October 1, have flooded the country with poorer grades of butter. The necessity of more farmer-owned butter and cheese plants is more apparent daily, to produce butter and cheese of high quality. The cause of the low prices on butter and cheese is evident, and is not encouraging to dairymen.

League Growth.—Despite vicious attacks, two thousand new members joined the Dairymen's League during the month of October, making a total membership of 88,128, owning 936,394 cows and 1,117 local branches. Unjust attacks but strengthens the farmers' organization.

Election Note.—Not one rural county in New York state went for Cox in the recent election.

Milk Drivers' Demands.—The demands of organized drivers of milk wagons in New York city will be arbitrated by a board consisting of three men selected by the union, three by the distributors and a seventh to be selected by the six. The minimum wage is now $35 a week and 2 per cent commission on all sales collected, amounting to $65 to $75 a week. The increase demanded is $10 per week


I'M SORRY AL' BUT I HAVEN'T A BIT OF CHEESE IN THE HOUSE
SHUCKS' I WANTED TO BAIT A RAT TRAP IN THE CORN CRIB - THE RATS ARE THICKER THAN ANTS ON A MOLASSES JUG'
I'LL FIX 'EM! I'LL BAIT THE TRAP WITH CORN - THEN COVER THE REST OF THE CORN IN THE CRIB WITH THIS OLD CANVAS
MY SCHEME OUGHTO WORK FINE! BET I CAUGHT A TRAP FULL OF RATS!
THE NEXT DAY
FOR THE LOVE OF MIKE!

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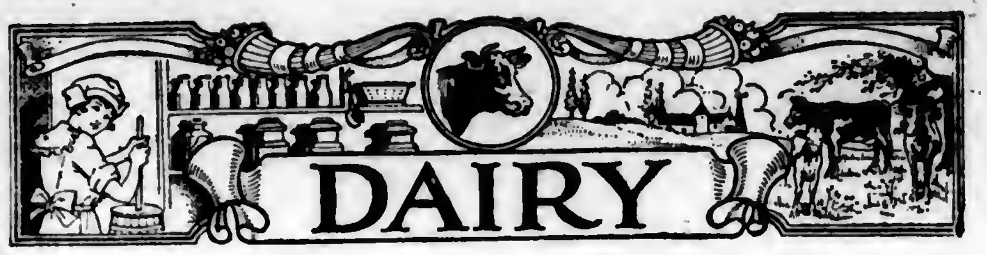

TUBERCULOSIS IN MILK

Emile Berliner, president of the Tuberculosis Association, has given out a statement in the press, in which he declares that the tuberculin test as a means of insuring a safe and sanitary milk supply is wholly inadequate. "A herd may be tested today, and no reacting animal be found, and again in six months, when one or several animals may be discovered with tuberculosis," says Mr. Berliner. "It is entirely possible that within a month from the first test the milk from that herd may contain living, active, virulent tubercle bacili. And such milk, if consumed in the raw state, in particular by children, may give them tuberculosis, notably, of the intestines, of the spine and of the glands.

"Butter made from the raw cream of such milk would likewise contain the bacilli in an active and virulent state for at least four to five months. This has been proven by careful tests made at the laborities of the United States Department of Agriculture.

"It is easy to dope a herd with certain easily obtainable chemicals and thereby prevent the tuberculin from acting in a test, even though animals in the herd are effected with open tuberculosis. Animals may be in excellent physical condition, giving plenty of milk that is entirely pure and wholesome for healthy adults, containing no tubercle bacilli nor other disease germs, and yet such animals may have a touch of tuberculosis, which would cause them to react to the tuberculin test.

"The monthly record of the health officer of the District of Columbia proves that herds of dairies licensed by him, because they were tuberculin tested and inspected at the time the license was issued, may yet furnish milk at times, and which can be freely sold in the District of Columbia which afterwards is found by him to rate as low as 39, and many between 40 and 60, out of a possible 100 in the sanitary standards. This by itself is proof that the tuberculin test and occasional inspecting is wholly inadequate to be relied upon.

"Even slightly infected or impure raw milk and cream, if continually partaken of, will gradually reduce the natural resistance of the human body if then the disease germs should happen to enter thru the air, or thru water and food, sickness will follow the outcome of which depends [illegible] the degree to which the person has been weakened and his resistance reduced.

"These statements have been drawn up after consultation with a prominent, practical investigator of the United States Government, a man versed in the subject of tuberculosis and the conditions on which the entrance of disease germs into milk depends. This prominent investigator, being an employe of the government, cannot publicly testify unless he is officially summoned to do so," says Mr. Berliner.

The remedy for this condition, according to this supposed expert, is pastuerization of all milk, under official supervision.

Figures just given out by Dr. William C. Fowler, District of Columbia health officer, are somewhat at variance with the assertions of the Tuberculosis Association president. The District of Columbia was one of the first municipalities to insist on the tuberculin testing of dairy herds contributing milk to the city. Practically all the milk received here for several years has been from tested cows, and quite largely from accredited herds.

Dr. Fowler reports that in the last twenty years there has been a marked decrease in infant mortality, the figures showing only one child in every 11.72 dying in 1919 as against one in every 3.44 in 1899. There is a general lengthening of life here in the District. Tuberculosis is rapidly decreasing in the District. In 1919 we had fewer cases of tuberculosis than any other city in the United States.

Commenting on this milk discussion, Secretary A. H. Loomis, of the National Dairy Union, says: "I know of no reason why Mr. Berliner or any one else should seek to discredit milk as food by the impressions which this statement seeks to convey, and especially in a city where the milk supply is so carefully watched and public health guarded as in Washington. To say the least the authorities are far from being in agreement that bovine tuberculosis can be or ever has been transmitted to human beings thru the use of milk as food, and I have no evidence upon which to predicate an opinion that Mr. Berliner's statement adds anything to either side of this question. The decreased record of tuberculosis under the present milk inspection laws administration indicates that he is entirely [illegible] E. E. R. [illegible]

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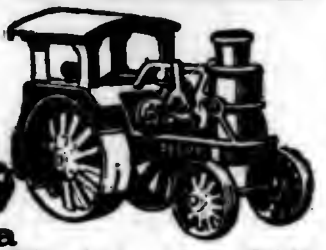

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SILO CREDITS

Farm accounts bring to light the financial value of the silo. The recent interest in farm bookkeeping is proving of great help in finding true values of crops and farm equipment. The economic worth of the silo is demonstrated beyond question by the keeping of records, and many men are surprised when they figure up at the end of the year and find its utility two or three times greater than they expected. Perhaps this is one reason why the silo has come so slowly into general use. Many years ago we found it at nearly all our Experiment Stations, and feeding tests proved that it was of great value in the economical production of stock and stock products. This information was given out in bulletin, pamphlet, and verbally; but for some reason it was not generally accepted. The average stockkeeper looked upon the silo as a luxury, as something that belonged only with an Experiment Station or on a millionaire's farm; and so it was passed up; and for many years those who needed the silo most lacked its saving benefits.

Some recent feeding tests have shown the silo to have even greater value than it was supposed to possess. Reviewing the experiments where steers were fed silage, ocmpared with other dry foods, the silage added a money value to the steers of from four to sixteen dollars per head, the variation being caused by the individual merit of the animal and the length of feeding period and price of rations. With other farm animals equal values were found. In milk and butterfat production the saving on a pound of butterfat ranged from six to twenty cents, and on one hundred pounds of milk from twenty-five to fifty cents.

The big corn crop produced this year will provide ample feed for all our stock; but the price has so fallen that the grower of corn is greatly discouraged. If more of this corn were put in the silo, the corn which was grown for market would find a much better sale. In some sections distant from the railroad, there is talk of using the corn for fuel. Let us hope that this will not be done. There would be no need for this misuse if the grower would put more of his corn in the silo and market his crop thru the live stock. This would be condensing the corn to a higher priced commodity, easily transported and always commanding a market. —A. L. Haecker.

THE PENNSYLVANIA RECORD

Please correct a statement appearing on page 22, issue of November 13, which says that Alma Segis Colantha holds the state record for a four-year-old cow, as Pauline Mable Maid, 295589, in 1919, made a seven-day record of 753.7 pounds of milk and 32.72 pounds fat as a senior three-year-old and was owned by R. G. Williams & Son, Bradford Co., Pa.

REMEDY FOR WARTS

Editor Pennsylvania Farmer:

In reading your paper I see where O. O. M., Cambridge Springs, Pa., says he has a calf with warts. I have had two troubled the same and used one part lard, one part sulphur, one part pine tar and mix in creolin, make as a salve and use every other day. It cleaned mine up nicely in a short time.—H. L. Spence.

The fellow who isn't fired with enthusiasm is apt to be fired.

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In each case the cow gets the same amount of nutrition in the same nutritive ratio and you get more money from your roughage.

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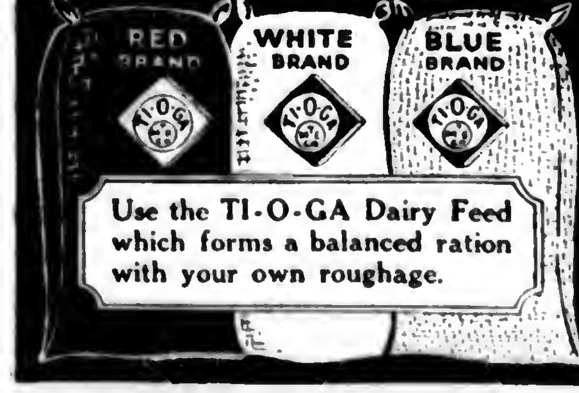

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HORTICULTURE

Maryland Horticultural Meeting

The Maryland Horticultural Society held its annual meeting Nov. 9-11th at Salisbury, in connection with the Farmers' Week conferences, with a large attendance of fruit growers from all parts of the state and Delaware.

In his annual address President A. P. Snader, of New Windsor, discussed the present apple situation. He spoke of the necessity for some plan of action which will tend to equalize apple prices with cost of packing and labor. He believed the growers would have to go into the markets themselves, but that the only real solution for our present troubles is for every man to accept the Golden Rule as his law of life.

Digging a $6000 rop of Potatoes on 15 Acres on Farm of Wm. H. Hart, Dutchess Co., N. Y.

Profitable Apples

The most profitable varieties of peach, pear, cherry and apples for Maryland conditions, was the subject of an address by G. Hale Harrison, of Berlin, who said there were only a few commercial varieties, from an economic standpoint. Among the apples, Yellow Transparent was mentioned as first in the list of early commercial yellow varieties. Williams Early Red is an old variety, and the earliest red apple of commercial importance. It is of good quality and a good shipper. Duchess of Oldenburg is a profitable early apple, selling at good prices. Wealthy is a fall apple that likes high altitudes. Northwestern Greening is an early fall apple that is very popular with bakers. McIntosh is a fall apple in Maryland and an exceptionally heavy bearer. Grimes Golden is one of the most popular fall apples. Delicious is a late fall variety that always sells well. It should be sold not later than January, and should only be planted to a small extent. Staymen's Winesap is a winte[illegible] that prefers a sandy loam [illegible] Winesap is a popular winter va[illegible] a good keeper. York Imp[illegible] most popular for export [illegible] easy to handle. The Gan[illegible] light red apple, poor in qualit[illegible] eastern market[illegible] In [illegible] an apple orchard. Mr. H[illegible] recommended the plantin[illegible] of one variety to be able to ship in car lots.

Varieties of Peaches

Of the peaches, Carmen is the earliest variety of commercial importance in Maryland. It is a semi-cling, but the first reliable variety for shipping. The Hiley is one of the greatest sorts ever introduced. It is the first absolutely free-stone white peach of commercial importance. The Ray is a leader. It is large in size, most hardy and prolific, and does best on light sandy soil. Belle of Georgia is the best known white peach and a sure cropper. Elberta is the best variety in the world, and should be largely planted in commercial orchards.

Cherries and Pears

Cherries have never been considered as money makers in Maryland. The sour varieties such as Early Richmond and Montmorency were recommended as preferable for planting.

Maryland is a great state for pears. The Bartlett sells at highest prices, but is subject to blight. Kieffer is most largely planted. Mr. Harrison would not recommend any other varieties for planting on a commercial scale.

Secretary C. E. Bryan, of Havre de Grace, is his report said the society was preparing to make a survey of fruit in the state which would include the number of trees, age of setting and variety in each orchard in the state. The society is going to continue its reports of fruit crop conditions and an urgent request was made to every fruit grower to fill out the questionnaire blanks promptly when they are sent out in season.

Professor W. A. Sherman, specialist in the Bureau of Markets, spoke of the Vestal standard container bill as an excellent measure that will mean a good deal to the honest fruit and vegetable growers.

Spraying

Prof. E. N. Cory, state entomologist, made a report on dusting and spraying experiments in Western Maryland orchards, in which he mentioned many cases where non-productive orchards had been made to bear profitable crops by careful spraying. In the state experimental work they [illegible] abandoned dusting and are sticking closely to spraying. "If we [illegible] get good results with spraying," Professor Cory said, "we see no reason why we should go into dusting."

Borer Remedies

Two so-called remedies for peach tree borers have failed to make good, acording to Professor Cory. One is a miscible oil preparation and the other a mixture for which extravagant claims have been made, called "borercide." In two orchards where effective control had been effected by this mixture, it was claimed, it was found that the claims were not correct. The only place where it seemed to be doing any good was in the orchard of the manufacturer of "borercide," and it was found that he had made two applications at three times the rate recommended to farmers to use.

Truck

Prof. W. A. Sherman gave a talk on canteloupe growing in which he emphasized the need of studying the methods and conditions in western competing districts for the purpose of improving conditions in the eastern sections. One of the means suggested, of overcoming the climatic advantages held by the California growers, was to allow the melons to get a little riper than those shipped by the California growers.

D. N. Shoemaker, of the Bureau of Truck Crop Investigations, of the Federal Department of Agriculture, spoke of the troubles experienced with cannery peas in Maryland the past season. There were 1700 acres of objectionable Alaska peas in the state. The vines were long, ripened unevenly, and the peas turned dark. The seed came from the west. The best advice Professor Shoemaker could give was to buy no seed peas on sample. No canner can afford to buy seed peas from a seedman who does not control his own stock.

The following officers of the Maryland Horticultural Society were elected to serve the coming year: President, C. E. Bryan; vice president, J. A. Cohill; secretary-treasurer, S. B. Shaw.—Elmer E. Reynolds.

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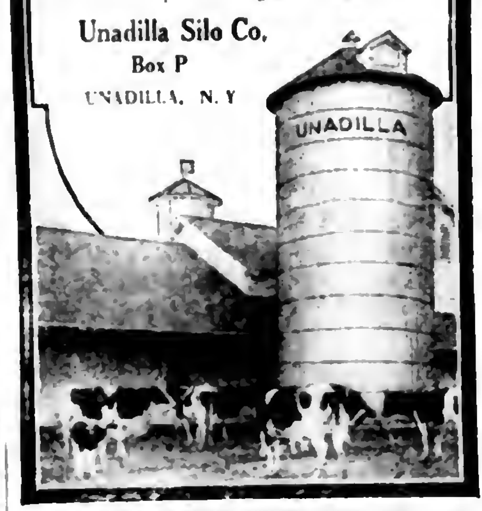

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A BEGINNER'S EXPERIENCE

The following is a report of a three-minute talk on "How to Grow the Best Crop of Apples," by Mr. Q. O. Buck, at Carbon Co., Pa., inspection tour:

"Until early this spring I did not know much, if anything, about fruit growing. I had an old orchard here of 160 trees in fair condition, but for the past five years I did not average 150 bushels of fruit, and all of that was not fit for market. I thought the orchard was getting old and 'worn out.' The County Agent came out early in spring and suggested that we put on a spraying demonstration in the orchard. This I consented to do after considerable persuasion on the part of the County Agent, and hopes of the profits that would come of it.

"Well, to begin with, he advised that I purchase a power sprayer adapted to both fruit and potato spraying. We had seen demonstrations enough in the county to prove the value of potato spraying, so I felt that the loss would not be entire as I could use it on my eleven acres of potatoes to a good advantage. In due time the sprayer arrived and with the help of the County Agent we set it up and put on the dormant spray some time in April. This was the part of the work that worried me most and I wondered how we could ever reach the top of those trees with the spray material. I was certainly delighted to find that the sprayer would supply 300 pounds pressure and with the use of the spray gun we could easily reach the top of the trees. My, how the trees were "soaked." I was surprised at what a little time it took to spray the 160 trees and the County Agent assured me that only four more applications were necessary, that would mean only four more days in the season.

"The County Agent told me on leaving that he would be back in time for the next spray, and for me to have everything ready. The spray was made when the blossoms showed pink. They called it the scab spray. It certainly was well named for one of the trees that was omitted does not have a peck of apples that are not scabby. He explained to me that the next application would be made when the petals were falling and that was to control codling moth and later infections of scab. This was applied at the right time for the County Agent came along and told me when to begin. Two other sprays were made, one they told me for scab and codling moth and the other for sooty fungus or "cloud." You can see the results here. I request you in going thru the orchard to find any scabby or wormy apples. I believe that I will have over 2000 bushels of perfect fruit. I am wondering whether a man with this many trees is not better off than the ten-acre potato grower."—Nicholas M. Rahn, County Agent.

"PENN STATE BALLHEAD" CABBAGE RECORD PRODUCER

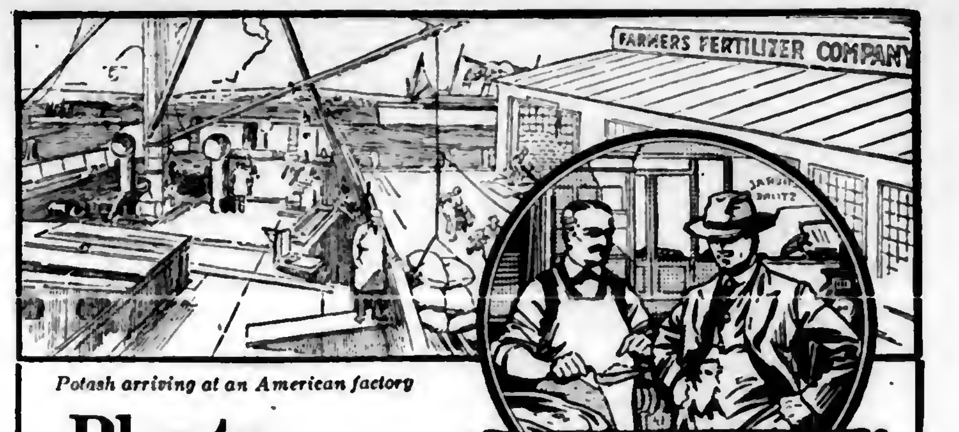
Eight years ago plant breeders at the Pennsylvania State College school of agriculture, in an endeavor to suit crops to the soil of the college farms, found an unusually large, solid and well shaped head of Danish Ballhead cabbage. It was segregated and made to produce seed. More seed was obtained from successive plantings until during the past season one acre of plants, all descendant from the one selection, yielded nine tons more than the average commercial strain of the same variety. The developed selection, which has been named "Penn State Ballhead," last season yielded twenty-six tons to the acre, as against seventeen tons produced in adjoining rows from ordinary Danish Ballhead seed.

This latest contribution of State College specialists to be betterment of Pennsylvania agriculture, is not looked upon as phenomenal by C. E. Myers, professor of plant breeding, who has done the experimenting associated with the development of the strain. He says it is simply the result of applying well known principles of plant breeding to one of the important truck crops, and merely one phase of the investigational work that is being done at State College. At present there is no seed available for distribution, but plans are being made to have some for the season of 1922.

Cause for the original selection that eventually evolved this high producing strain, came with a desire to find a plant that would give the best production on the limestone soil of the college farms. As convincing proof that Penn State Ballhead will give the same mammoth production on other soil it was grown last season with an exceptional yield on an entirely different type of soil in another part of the state.

MEET OF PENINSULA FRUIT GROWERS

The Peninsula Horticultural Society is holding its annual meeting this year in the Hotel du Pont, Wilmington, Del., Nov. 30, Dec. 1 and 2, a month earlier than usual. The program will include the discussion of fruit growing.



Potash arriving at an American factory

Plenty of Potash

AFTER five years of Potash famine there is now plenty of Potash to be had at prices that will permit it to be used at a good profit.

When Potash in mixed fertilizers was sold at five dollars per unit, everybody exclaimed that the price was "prohibitive." This was a state of mind. As a matter of fact, when the records of long continued experiments, east, south, and west, were carefully gone over it was found that there were plenty of cases where the crop increase from the use of Potash on corn, wheat, oats, cotton, tobacco, potatoes, vegetables and fruit returned over five dollars per unit, even valuing the crops at prices current before 1914.

Now prices of Potash are less than one-half of these "prohibitive prices," and prices of farm products are still high enough to make the purchase of the five to ten per cent Potash fertilizers a very profitable investment when yields alone are considered.

But this is not all. The shipping and keeping quality of many of our truck, fruit and special crops has suffered from lack of Potash.

Plant diseases have increased for the same reason.

Our best lands have been overworked to the limit and need restoration.

The fertilizer manufacturer who really has the foresight to understand that he serves his own and his customers' interest best by furnishing what his community really needs will return to the formulas that were found most profitable for his community before the Potash famine upset things. Indeed this is putting the case mildly, for provision should be made not only to restore the old high Potash formulas, but to use additional Potash to restore the drain on the soil during the past five years.

We never advised the use of Potash on soils where we had reason to believe it would not prove profitable, and never shall do so.

There is not a single crop on which Potash has not been found profitable on many types of soil.

In the readjustment period when farmers must use every means to assure success it is of utmost importance that they should not be turned aside in their efforts to buy fertilizers with a reasonable (five to ten) per cent. of Potash.

Potash Pays

and after five years of Potash famine it will pay better than ever.

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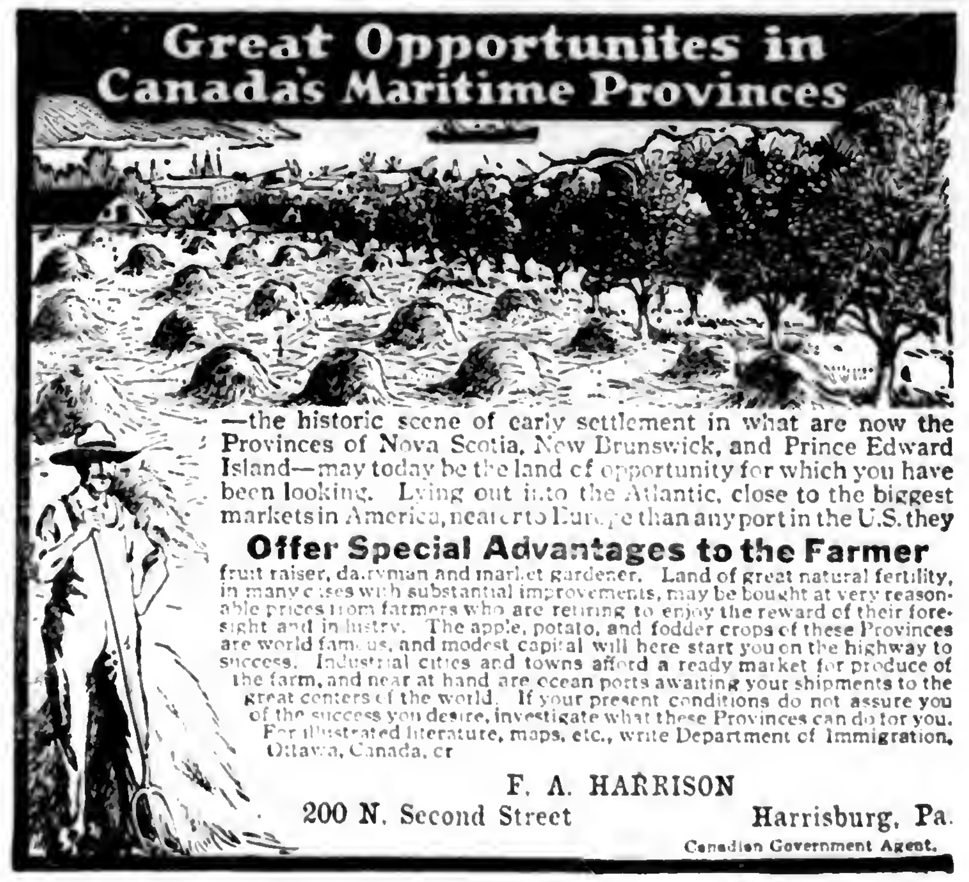

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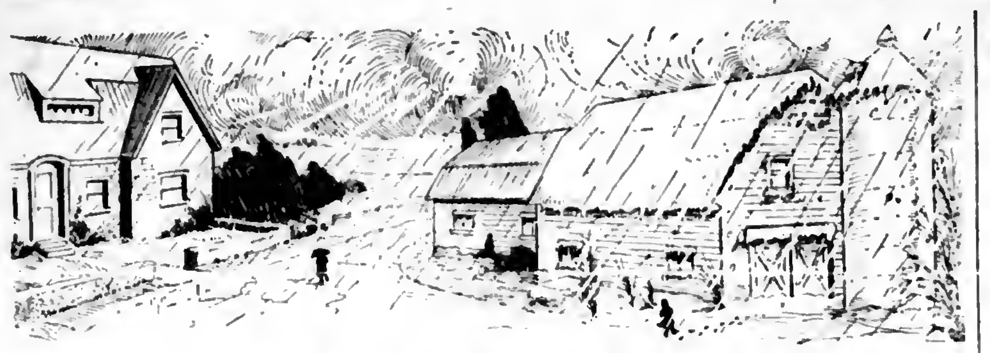

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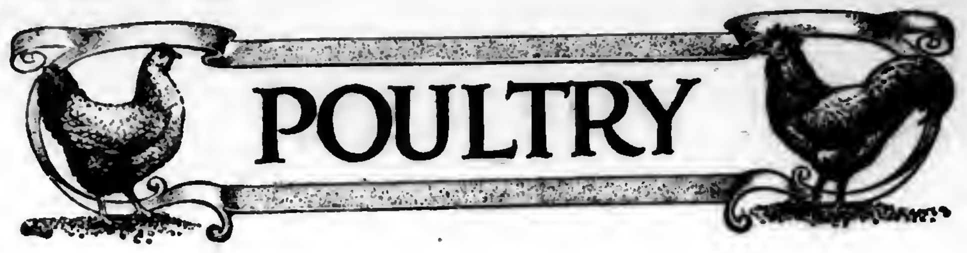

POULTRY

Artificial Illumination

The Latest Conclusions at the N. J. Experiment Station

By HARRY R. LEWIS

There is probably no one development with greater potential possibilities than artificial illumination to increase egg production. It is a relatively new field of study and practice, hence there is much to be learned and many points in its application which the poultry keeper must watch. Practically all of the commercial poultry raisers of New Jersey are using lights. Many farmers are finding them a decided aid in inducing winter production. The Poultry Department at New Brunswick started some very exhaustive experiments during the winter of 1918-19 and have continued them during the past winter. The results and suggestions given in this article are based: first on the work at New Brunswick during the past two winters where lights were used on 1100 layers housed in Multiple Unit Laying Houses; secondly, the Poultry Department has made free use of questionaires in studying the results secured from the use of lights on poultry farms, with the result that it has been possible to include data covering every phase of the lighting problem from some 160 flocks, representing over 100,000 birds.

Artificial illumination, if properly planned and handled, is a powerful factor for increasing production. It must be remembered, however, that when birds are put under lights they are kept under a more or less artificial condition, an unnatural and an unseasonable condition, at least. Any faulty method of management or simple mistakes due to carelessness or thoughtlessness will react immediately in a disastrous way. Such reaction will affect both the health and productivity of the flock.

The results of studies in New Jersey warrant the following conclusions here presented in the form of [illegible]:

What Lights Will Do

1. Lights properly operated will materially increase the winter egg production of pullets. Lights properly operated will also materially increase the yearly egg production of individual hens.

2. Lights make it possible to carry February hatched pullets thru the first fall and winter production period with much less moulting than where lights are not used.

3. It is not generally as profitable to operate lights on yearlings or two-year-old hens as it is on pullets.

4. Putting lights on culled hens to get fall and early winter egg production is a questionable practice.

5. Lights increased the profit per [illegible] over feed and fuel cost for a 9 [illegible] period as follows:

600 unlighted pullets, $3.30 profit [illegible]

[illegible] pullets given morning lights [illegible] per bird.

[illegible] pullets given an evening [illegible] $5.1[illegible] profit per bird.

[illegible] The fuel and operating cost [illegible] for providing [illegible] 1100 [illegible] the current being supplies by a Farm Lighting Unit, was .044 cents per bird. One egg increase pays the fuel costs.

How to Operate Lights

1. It is of the greatest importance that all birds under lights be graded and flocked according to age, condition and laying qualities. Pullets of different ages and pullets and hens should always be kept in different flocks. For the best results each group must be handled in a different way, wihch is impossible when they run together.

2. When lights are operated on pullets, they should be started November 1 and run until April 1 or later. Starting lights earlier than November 1 results in an exceedingly heavy production in the early fall, making it almost impossible to hold the birds in high producing condition during the following severe winter months. The few eggs gained by starting the lights earlier than Nov. 1 will be more than lost in the resulting winter slumps which are almost sure to follow.

3. When lights are run on hens, they should not be started until Jan. 1 and should be run until April 1 or later. The idea in running lights on hens is to allow them to go thru moult normally, get back their body weight and to come into normal producing condition, which generally takes place about the first of the year. On or after this time lights may be used on yearlings or two-year-old hens which are mated and used for producing purposes. It is generally very undesirable to stop artificial lights until the hours of normal daylight have more nearly caught up with the artificial day. This means that it is unwise and unsafe to stop the lights until April 1 or later.

4. When lights are finally turned off in the spring it must be done very gradually; about ten minutes change in a single day is all that it is safe to make.

5. Morning lights are superior to evening lights or to a combination of morning and evening lights. The best time for starting the lights is at 4 A. M. in the morning, running them until dawn, or to start them at such a time that during a normal day of 24 hours, 14 hours of lights and 10 hours of darkness may be given the birds.

6. Feeding is one of the vital problems in the successful management of birds under lights. They should be fed grain, if possible, four times a day. This keeps them active and exercising. The exact time will depend upon the time the lights are used. If morning lights are used, grain at 4 A. M., 8 A. M., 1 P. M., and just before dusk seems to be the most desirable time, the heaviest feedings being given at 4 A. M. and dusk.

7. Birds under lights must be fed grain more heavily than birds not under lights. Without this precaution a rapid reduction in body weight [illegible] will follow due to the heavy production which they are making. During the winter months, 14 pounds of grain per day to each 100 hens under lights seems to be the

correct amount. Be sure that dry mash is left before them constantly.

8. Electric lights are far superior in efficiency, in labor cost and in cost of operation to any other method of operating illumination. Two 25 Watt lights in a standard multiple unit section, 20x20, poultry house seems to be a sufficient amount of light and gives the best distribution. Two lights are far superior to one, as the pen is more evenly illuminated and the amount of shadow is reduced to a minimum. The lights need not be suspended from cords, but may better be attached directly to the rafters, just a little forward of the center of the house. The lights should be backed by wide, ample reflectors.

9. Barn lanterns, while showing some influence on production, are not as efficient as electric illumination. They do not provide sufficient light and there is the great burden of caring for them. However, on a farm or with a small flock their use may be profitable.

10. With gasoline lanterns the great amount of labor is required and is a serious drawback. Danger from fire is an important matter. The fact that dust, which is so plentiful in the ordinary poultry house continually clogs up the air in-take in spite of frequent cleaning, is a serious set-[illegible] to the efficiency.

An Attractive Set of Farm Buildings

11. In order to operate electric lights automatically, expensive time switches are not necessary. Many poultrymen are finding it economical and efficient to accomplish the automatic turning on of the lights by using an automatic alarm clock placed so that the winding key comes in contact with a level switch. When the alarm goes off the key turns and [illegible] the switch over.

12. Tests show that birds will react favorably to lights in from seven to ten days immediately following the application of the artificial illumination. During the winter months, if properly handled, flocks may be expected to increase their production [illegible] fifty to one hundred per cent [illegible] unlighted flocks.

13. If birds are handled properly under lights, there should be no expectation of moult or decided check in production during the lighted period or immediately following or when lights are turned off in the spring, providing in the latter case the lights are not turned off before April 1, and further providing lights be reduced gradually.

14. Birds under lights are no [illegible] subject to roup, colds, canker, [illegible] any other diseases. As a matter of [illegible] the general results seem to show that lighted flocks are better physically and more resistant to disease.

15. Lighting is primarily a feeding problem. By lengthening the day, more time is given the birds to consume food from which they can manufacture more eggs. It is not a forcing of production in any sense of the word. Lights simply advance the season of heavy production from the spring months, when the days are lengthening to the natural shorter days of the fall and winter. The lighted flock in December and January resembles in every respect the heavy producing flock in April under natural conditions.

Some Things Not to Do

Do not run lights irregularly.

Do not underfeed the birds with grain.

Do not forget to water the birds when the lights are first turned on in the morning.

Do not turn lights off too early in the spring.

Do not turn lights off quickly in the spring.

Do not stop feeding early and late when lights are finally eliminated.

The Evening Lunch

The Poultry Department has been experimenting for the past two years with the so-called evening lunch methods of applying artificial illumination. The plan is to let the birds get up in the morning at dawn and go to perch at dusk, and then, in order to shorten the long night period and to get them to eat more food, the practice has been to turn the light on at 8 o'clock in the evening and leave them on for one hour, during which time the birds are given a substantial grain feeding with plenty of fresh water to drink. Last winter the birds did just as well under this method of feeding as they did under morning lights. Further experiments are being conducted to make a final determination as to the merits of this method. The following are some of the advantages of the evening lunch briefly summarized:

Let the birds get all the feed they require.

Reduces cost of operating lights by not requiring them so long.

Eliminates the need of feeding and watering at 4 A. M.

Gives the birds longer hours on the perches for sleep and rest.

Does not break into the [illegible] time for getting on and off the perches.

Does not require dimmers, for after the first few days the birds will all be on the perches by [illegible]

Produces apparently as good results with less danger from [illegible] handling.

Wood is Scarce—Coal is High
Build a WARM House

WITH the winter winds howling and the cold creeping through the thin weatherboards, the family in grandfather's boyhood hugged the stove a little tighter, while someone fetched another armful of wood. But today, firewood is fast disappearing and the cost of coal climbs steadily higher. The remedy is a ***warm*** house—built of

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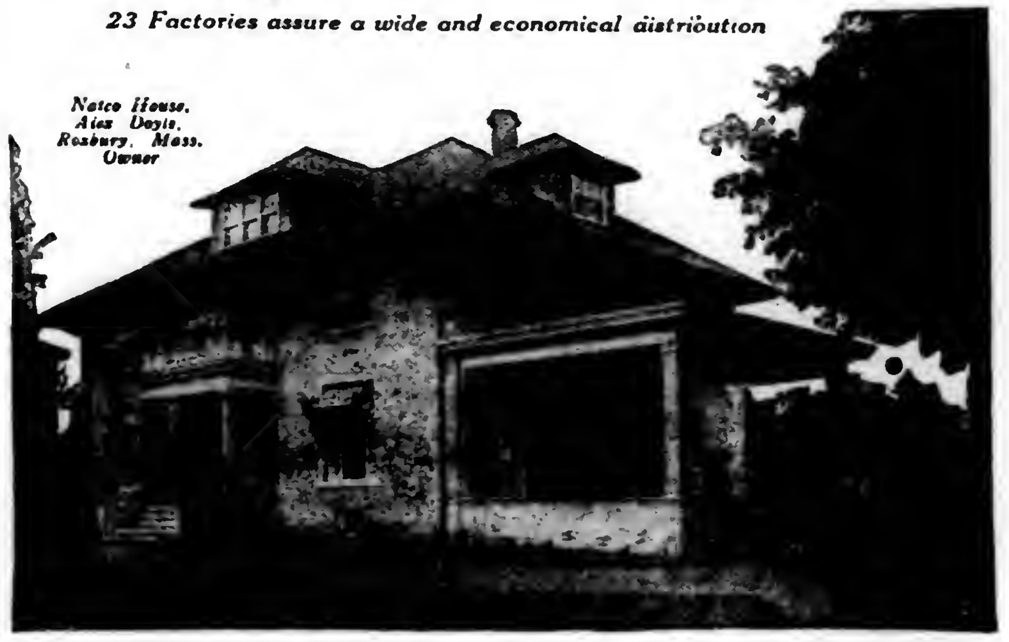

Natco House, Alex Doyle, Roxbury, Mass. Owner

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Quilt Block Ideas

Quite a number of our readers, old and young, and middle-aged, have asked for some suggestions for quilt making. We present herewith a collection that should afford room for plenty of quilt-making ingenuity for grandmother as well as for small maids. Some of the blocks shown herewith are plenty easy enough for young girls, while some are complicated enough to test the skill of the more deft adult needlewomen.

Take the big picture, for instance: Notice how cleverly the whole quilt is developed by the right combination of simple blocks like the one shown in the upper left corner of the illustration, until one gets a square within a square, as one joins the blocks. Of course, you have to watch your colors, and get them in the right place, or you spoil the square-within-a-square effect. The small design in the upper left corner shows you how to combine the colors.

The group of small blocks shown at the lower left corner of this page includes some very easy as well as some quite intricate patterns. However, the drawings are so plain that the shape of the different pieces composing each block is quite evident, and the heavy lines indicate where they are sewed together. The chief difficulty will be with the curved pieces, for it is always harder to get them even and joined neatly. The idea for the large design is furnished by Mrs. M. H. Emmons, Morris Co., N. J., the smaller designs are by Mrs. B. Moeller, Hamilton Co., O.—H. M.

A B C Quilt for Baby

This quilt may be made of any combination of colors desired. The popular blue for a baby girl and pink for a boy baby are all right, but any other colors preferred may be used. For instance, a real Turkey red, if it can be found, makes a very bright color that catches baby eyes. Unbleached muslin is combined with the Turkey red, and a lightweight muslin should be used.

If pink and white is desired, pink chambrey is a good material. If blue is wanted, either a plain blue chambrey or a pin-check gingham is good.

Cut out thirty blocks of the cream white unbleached muslin, four inches square. Letter each block with a letter of the alphabet, either in cross-stitch or in outline; probably the outline will be easier. The alphabet letters will take up twenty-six of the thirty blocks. On the other four outline the numerals thus:

Put 1, 2, 3, diagonally on the first block; then 4 and 5 on the second; 6, 7 and 8 on the third; and 9 and 0 on the fourth.

When the blocks are done and pressed, put them together with two-inch strips of whatever color you are using, arranging the blocks in strips of five across the quilt, and six lengthwise of it. Having set all the blocks together with the various colored strips, border the quilt all around with a two-inch strip of the same color. Then add a five-inch strip of the cream-colored muslin.

Line the quilt with the cream color. A single layer of wool batting for filling makes a very warm lightweight quilt for baby.

A quilt or comfortable of this sort will serve a double purpose when baby begins to notice letters, and you will find it a very great aid in amusing the child, as well as in helping it to learn the letters and numbers. I know the first step in teaching children to read nowadays is not to teach them the letters but whole words, but it is quite an advantage for them to know he letters, too.—Rose S. Miller.

CANDIED APPLE

This is easily made, and now while apples are plenty is a good time to make some. It is fine for use as a substitute for candied lemon and citron in cakes and puddings, also in cornbread, instead of the "handful of raisins" so often mentioned in recipes. Candied peel one finds in the grocery stores is so very expensive, and raisins are not so cheap as they used to be, so it is well to make this good substitute out of apples that are so plentiful this year.

One drawback about candied apple is that it will not keep dry indefinitely, as candied peels do, but one can readily make some as needed, and it will keep for several days in a dry place. Per two large apples use 1 cup sugar and ½ cup water. Stir over the fire until the sugar is entirely dissolved and the syrup boiling.

Drop into this syrup the apples, pared, cored, quartered and the quarters cut into six or eight pieces. Let simmer very slowly until the apple becomes transparent. This may take almost an hour. Apples that keep their shape in long cooking are best for this purpose. For instance, Ben Davis are ideal for such use.

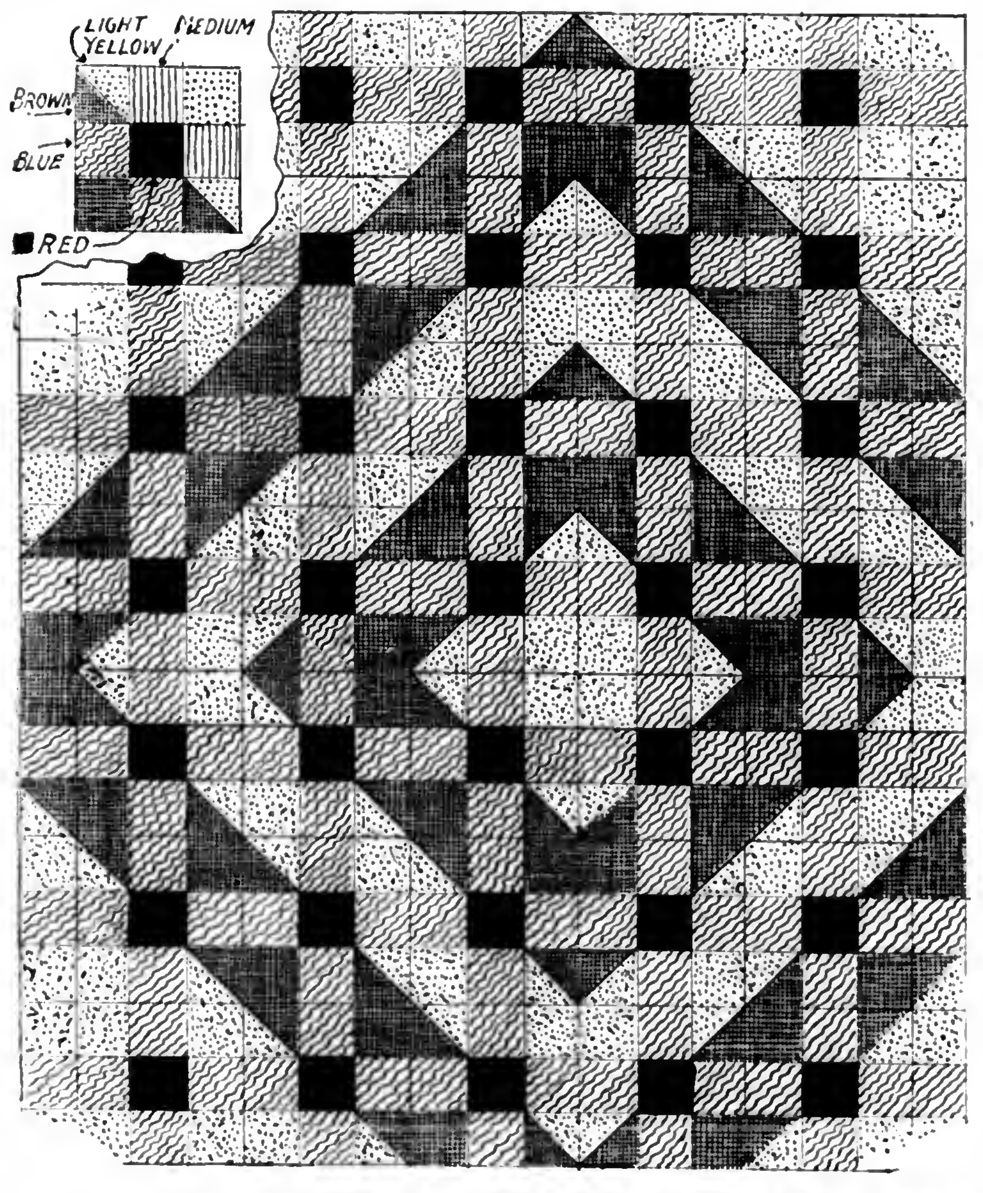
The bits of apple are then skimmed out of the syrup, and placed in a very moderate oven to dry, the door being kept open, and the pieces of apple turned occasionally.

This amount will make about one cup of the candied apple, and is enough for two loaves of cornbread, two cakes or two puddings.

When sugar was scarce I used to make it with corn syrup, using one each of syrup and water, boiling them together for ten minutes before adding the apple.

If one wishes to keep a supply on hand so as not to have to make it every time it is wanted, leave the apple in the syrup, then drain and dry it as needed.

The syrup left when this candied apple is made of either sugar or corn syrup can be used over and over again for the same purpose by adding more sweetening. Or it can be used for sauces or pickle making.—Mrs. H. M. Woodward, Winnebago Co., Ill.



HOME SURROUNDINGS CONTEST

Perhaps your farm home, with its surroundings, is one of the most attractive in New York state. If it is, the State College at Ithaca, N. Y., would like to know about it. In order to learn of these pleasant country homes, the college has started a friendly competition to which any resident of the state is eligible to enter.

For this competition, photographic views of home interiors, exteriors and grounds are to be submitted. These photographs must be mounted as prescribed, and must be sent to the college at Ithaca before Jan. 15.

The entire collection will be judged by a committee selected from the college of architecture, the department of landscape art, and the school of home economics, at Cornell University. If the competition proves successful, the winning photographs and all others that have constructive interest will be exhibited in the home economics building during next farmers' week. The results of the competition will also be announced, and the winning pictures printed in leaflet form for distribution to the competitors.

Permanent Collection Is Aim

No prizes are offered as awards. The best four pictures in each of the three groups named below will be given winning places. If the contributors are willing, the college would like to retain the winning pictures and any others that are thought to have an educational value, as part of a permanent collection. The others will be returned to the contributors. The three groups are interiors, exteriors, garden and grounds.

Any good photograph of any portion of one's home will be acceptable provided the picture is properly mounted and of a size that conforms to the conditions.

Not more than three photographs may be submitted by any one person. One or two well-selected and well-mounted pictures are preferable to a quantity of poor ones. The main requirement is that the subject shown shall make a pleasing picture. No home is too simple or too modest for reproduction, providing it has individual charm.

Full details of the contest may be obtained by addressing the division of housing and design of the college at Ithaca, New York.

DO I UNDERSTAND MY CHILDREN?

"I just love Miss Brown," said Betty Jane, "she's the understandingest person I ever knew!"

What a wonderful tribute! Is there anyone of us grown-ups who does not long to deserve just this sort of approval from the little children whom we love?

As we recall our own childhood experiences, do not the times when we were misunderstood stand out very distinctly and very bitterly in our minds?

A mother told me of a little child who was angered almost into hysterics by having his lisp mimicked and mocked. "Do you want me to thing for you?" little John asked a guest in the friendliest fashion. "Yes, indeed, you darling I want you to thing for me," the visitor said laughingly imitating his lisp. The child's ears were keen. He knew the correct pronunciation altho his lips could not yet form it, and his face reddened as he said in a grieved voice, "I did not thay thing. I thald thing." "Oh, you precious lamb, thing for me or thing for me—I dont' care. I just adore that lisp of yours."

Did she get the song—the child's offered gift to a guest? No. She had killed the joy of self expression. She had grieved the boy and made him sulky and she had truly been guilty of an act of rudeness to a trusting little child.

But rude and cruel as it is to laugh at the mistakes of children, it is far worse to laugh at their fears! Just because we know that there are no goblins lurking in the dark, we find it difficult to understand the agony, the actual suffering of a sensitive timid child who is forced to fight his fears all alone.

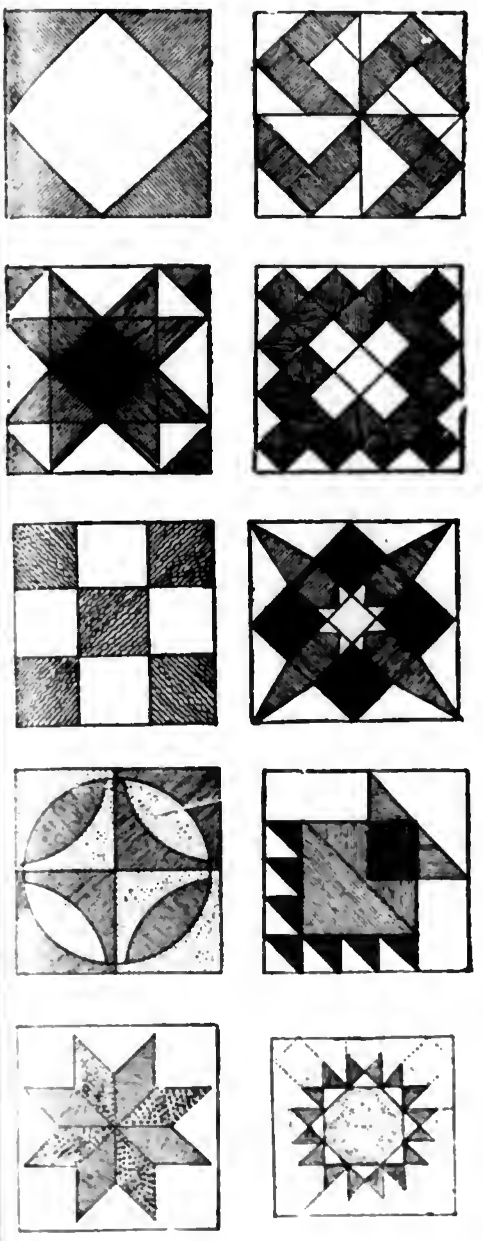
All lovers of children condemn the ignorant nurse who threatens, "The Boogey Man will get you in the dark tonight if you don't mind me." I know one mother who came home after making some afternoon calls and found her little son in bed with a high fever and in his delirium he cried out over and over again:

"Don't let the policeman get me—Don't let him take me away from my mother—Don't let him—Don't let him!" The thoroly frightened nurse confessed that she had put him to bed as a punishment and had left him there, saying "Now I'm going to get the policeman to take you away so you won't see your mother again." She had left him there alone, thinking that his screams of terror when a door opened or closed, would "teach him a good lesson."

Dorothy Canfield Fisher's "Understood Betsy" is a most delightful study of a child who was sometimes misunderstood, a story so charmingly told that grown people and children can read it together with great enjoyment.

And, after all, is not that the great secret of understanding—the doing of things together, talking together, walking together, sharing each other's joys and sorrows?

"Never mind, honey," said wee Lois to her dearly beloved kindergarten teacher, "never mind if you are hoarse. I will tell the children a story today and you won't have to talk." Isn't this a true illustration of the mutual desire to be of service which we so long to have underlie our relationship to the children who are little children for so very few years?—Anne G. William, National Kindergarten College.



Detail of Attractie Clever Quilt.

For key to colors see upper left corner on next page.

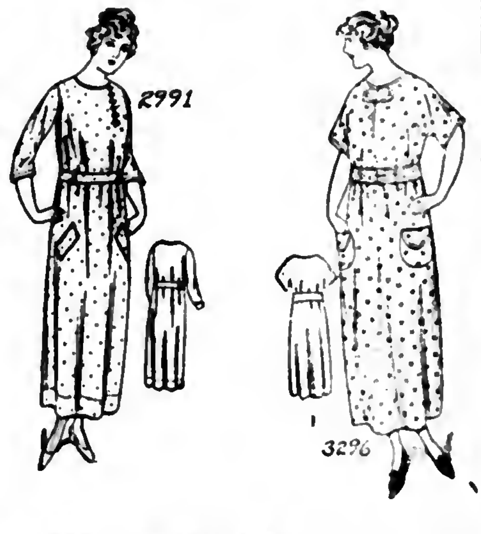
1. Pointed Square.
2. Whirligig.
3. Magic Cross.
4. Crosspatch.
5. Plain Square.
6. Star Square.
7. Melon Patch.
8. Flower Pot.
9. Diamond.
10. Rising Sun.

Serving larger portions of food than can be eaten is not politeness; it smacks more of foolishness.

PENNSYLVANIA FARMER PATTERNS

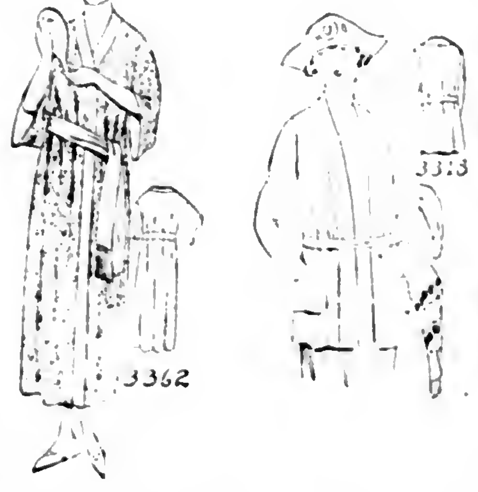
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct fitting of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2991.—A Simple House Dress.—The sleeve may be finished in wrist length with a band cuff, or loose, at elbow length. The pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5⅜ yards of 36-inch material. Width at lower edge is about 2¼ yards. attern, 10 cents.



3296.—A Serviceable "Cover All" Apron.—The pattern is cut in four sizes: Small, 32-34; Medium, 36-38; Large, 40-42, and Extra Large, 44-46 inches bust measure. Medium size will require 4⅜ yards of 36-inch material. Figured percale is here shown, with bindings of white cambric. Pattern, 10 cents.

3362.—A Comfortable Negligee.—Pattern is cut in 4 sizes: Small, 32-34; Medium, 36-38; Large, 40-42; Extra Large, 44-46 inches bust measure. It is a very comfortable, attractive style, suitable for crepe, crepe de chine, China silk, albatross, gabardine, lawn and flannellette. A medium size will require 9¼ yards of 27-inch material. Pattern, 10 cents.



3318.—Suitable for House Jacket or Under Coat Wear.—Pattern is cut in 8 sizes: For ladies and misses 32, 34, 36, 38, 40, 42 and 46 inches bust measure. A 36-inch size will require 3¼ yards of 40-inch material. The fronts may be closed or rolled back in tuxedo or shawl collar effect. Pattern, 10 cents.

It is possible to make a little meat go a long way by combining it with bread dressing, macaroni, rice, dumplings or potatoes; and the cheaper cuts of meat are as good to use in this way.

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Prisoners of War

By HOPE DARING

In Two Parts—Part Two

The light that flickered in Minnie Holt's eyes was the one that has illuminated many a martyr's path to the stake. She would not fail her husband. "I must do it, Samuel. Why, what will farms mean to us when we walk the streets of the New Jerusalem? It's to help you I do it. Elder Potter says it will help, though he's not sure it will save you. Oh, Samuel! I'd take your chance and give you my crown, if I could, but this other is all I can do."

Samuel Holt rose. He walked around the table, drew back his wife's chair, and lifted her from it. After holding her at arm's length for a moment he brought her to him and gave her a resounding kiss, first on one check and then on the other. "You are all right, honey, only you hain't got sense. I'm goin' to make war on that rascal, war to the death," and he left the room and the house.

An hour later he returned, to ask Minnie when the papers were to be made out. It was to be done on Saturday. Potter was to bring into the valley a lawyer who was a friend of his. This man would assist a Huntsville notary public.

Samuel Holt spent that afternoon Wednesday—and the next two days away from the farm. The skies cleared; it was "good husking weather," but the farmer did not enter the fields where the tent-like, brown shocks of corn stood in long rows. Saturday morning at breakfast he asked his wife:

"Course I will. That is, if it won't imperil your salvation."

"Oh, tain't that kind of a stunt. I'm goin' to drive up to my place on Mount Royal, and I want you to come 'long. You see, honey, if the world don't come to an end, an' you've give your place—a hundred an' sixty acres o' good bottom land—to Potter, we'll have to live on my forty. An' there's where a family ought to live, on the man's property."

They entered the one-story log hut Samuel had bought the land, with the proceeds of their farming, for the timber on it. They rode along the sloping highway, the mountain side above them spread with a tapestry of red and gold. Gradually the tense lines on Minnie Holt's face relaxed. When the sleek bay horses splashed thru a little brown stream, bridged only by a fallen tree trunk for foot passengers, she smiled. She called her husband's attention to a flaming sweet-gum that stood by the roadside. At last Samuel sprang out, to open a gate.

"Here we be," and he led the horses into a yard. "I'll tie 'em, an' then we'll go inside."

"Why, Samuel, you've put in new windows under the bars you nailed 'cross. Have you rented it?"

"I [illegible] to see anything that belongs [illegible] go to ruin. Come in."

They entered the one-story log hut that had been built by a former owner. Minnie was surprised to see that the place had been cleaned. There was a cot, a table and a rocking-chair. One of the cupboard doors stood open. Within she saw a few dishes and various packages. Near the fireplace was a pile of split wood.

"What does it mean? Are you—why Samuel!"

The man had stepped out of doors closing the door after him. Mrs. Holt heard the key turn in the lock. It was withdrawn, and her husband, evidently with his mouth close to the keyhole, said:

"Minnie, you're a prisoner. You're a goin' to stay here 'till Tuesday mornin.' Then, if the world hain't come to an end, and I reckon it won't, you can go back to your house, an' I'll clear out."

"Whatever do you mean, Samuel Holt? You unlock that door, quick!"

"I mean jest what I said. Didn't I tell you it was going to be war 'twixt Potter an' me? You're a prisoner o' war, 'til Tuesday. There's plenty of grub in the cupboard, an' I put in a Bible an' some newspapers. You needn't be 'fraid nights, 'cause I'll sleep out in that shack of a barn. Good-by, Minnie."

"But I tell you—"

He was gone. Minnie threw herself on the cot and gave way to angry tears. She had no way of knowing that her husband's refusal to prolong the interview had been prompted by a fear that he would weaken under her pleading.

Minnie's failure to appear at the evening meeting caused some surprise. When she was absent the second time, a delegation of women called at the farmhouse on their way home. They found it locked. Potter was about, asking questions, insinuating that something was wrong. He found Lizy a mile away, in her own home. All she could be induced to say was:

"I reckon they's gone off visitin.' I'm to go back Tuesday mornin.'"

Aaron Potter feared Minnie's disappearance would weaken his hold on his other converts. He labored zealously with them, threatening, promising, and finally getting a half dozen of them to keep the promise they had made him regarding their holdings in the valley.

In the meantime Minnie Holt had passed thru various stages of anger, suspicion, remorse and doubt. Desperately she tried to cling to her new faith. She importuned heaven for her husband's salvation and exhausted herself by prolonged fits of weeping. Not until Tuesday morning, just as day was breaking did she hear Samuel's voice outside the door.

"Don' be scared, Minnie, 'cause it's Sam. Jest slip into your clothes. I've got the horses here, and I'm goin' to take you over to Table Rock, where you-all is to meet Potter at sunrise."

Minnie had lain down fully dressed. She pinned on her hat and said, "I'm ready."

Samuel stepped inside. He held out his hand. "Be you mad?"

"I'm heartbroken, Samuel. You were cruel to shut away from me in these last days my only chance to save you."

In the dim, uncertain light she saw his mocking smile. She turned and walked out to the waiting carriage. Her eyes were hot and dry; all her tears had been shed.

Table Rock was only a mile away. The Holts reached it, to find forty persons assembled there. Many of them wore long, loose white robes. Sarah Turner rushed up to the carriage as Samuel brought the horses to a standstill.

"O Minnie! Where've you been? Why hain't you on a robe? An' Elder Potter hain't here."

The east was a mass of radiant light; in a few minutes the sun would appear. Samuel chuckled, then looked around him.

It was a pathetic sight. While a few were doubters, the majority of the men and women assembled there—unlettered, credulous—were sincere. To them Aaron Potter had been what he declared himself to be—a messenger sent from God. They had come to that mountain side, gay in its autumnal coloring, to meet a stern Judge, rather than a loving Friend and Father. Had Aaron Potter deserted them? If his story was false, if the day went on to night, to be followed by other days, many of those men and women would be homeless. They had trusted their self-elected leader implicitly.

Suddenly the mountain side was flooded with brightness. The sunshine brought out gleams of gold in the tops of the beeches further down the slope. All were silent. One moment of waiting followed another. At last the voice of Evan Holt's wife, fierce, defiant, rang out:

"Where is that man? He is a cheat. An 'Evan an' me give him our mill an' our house. Whatever'll we do? May God sent swift punishment to him!"

"Wait, wait, Miss Holt!" one of the men cried. "There may be what Elder Potter calls an error of time. You don't want to go into the next world, a denouncin' the Lord's anointed."

But the crowd would brook no delay. Where was Aaron Potter? Sunrise had passed, and the world stood. They were hungry.

A storm of invectives was let loose. Women wept, and men swore. Angry threats were uttered. Suddenly Samuel Holt sprang upon the bare, flat rock which Aaron Potter's followers had expected to see him use as a throne.

"Now it's not so bad as you think, boys. You are all alive, and the Lord is vindicated. I reckon tomorrow you'll all be 'shamed to remember that you thought He'd use Aaron Potter, even to do errands."

"But, Holt, we've lost all we've got," Will Marshall cried. "Hain't there something we can do? Did he get your place?"

'No, he didn't, not Minnie's. I say, folks, go hom and eat a good breakfast. Then all that's got a grudge agin Potter come over to my house. I reckon there's a way out."

In silence the Holts rode home. Not until they were in sight of the old farmhouse that had sheltered Minnie since her birth did she say brokenly:

"But for you 'twould have been gone. I ought to suffer though like the others. Samuel, I can't—"

"Don't try to talk now; you are too done out. I told Lizy to have breakfast ready."

It was ready. In the dining-room fireplace a brisk blaze of pine logs gleamed. The table was drawn up before it, and in the center was a cluster of the hardy yellow crysanthemums that grew at the kitchen door. A dry sob rose in Minnie's throat.

"I thought I'd be a walking the golden streets by this time. Honest, I'd rather be here. Samuel, it is wicked to be glad the Lord did not come."

"You couldn't be wicked if you tried, honey girl. An' the Lord'll take us when he's ready, without askin' Aaron Potter. He's the only wicked one, an' he'll get his come-uppance."

"I hope so," Minnie said savagely. Then she went out to the kitchen, bidding Lizy bring in the ham, eggs, corn cakes and coffee.

Two hours later all the men and women who had been induced to deed property to Aaron Potter assembled in the wide hall of the Holt home. They were surprised to find there Jack Dean, the county's young prosecuting attorney. No sooner was the last arrival seated that Samuel said:

"Just wait a minute for me. I've got an important witness to bring in."

He left the hall by the back door. Minnie sat where she could see him across the yard to the smokehouse. He unlocked it and entered, only to emerge a minute later, dragging Aaron Potter by the arm.

Evan Holt was on his feet. "See there! I'm goin' out and wipe the ground with that old fraud."

Minnie made a commanding gesture. "Set down, Evan. You can trust Samuel to settle everything."

"Here he is," Samuel announced, pushing Potter before him into the hall. "Step up lively now, Aaron. You are behind time in your 'pointment to meet these people."

"There was a moment's silence. Then Tom Hunter asked:

"Where'd you find the skunk, Sam."

"Where I left him after the meetin' last night, locked in my smokehouse. He had planned to take the midnight train, had his ticket bought. Now speak up, Aaron."

Potter's hands and face were streaked with dirt, and his clothing was torn. "You don't understand—" he began, but Evan Holt interrupted him:

"Oh, shut up! You, Dean? Is there any chance of my gittin' my mill back?"

"I am am going to let Sam tell you; the story is his," and Dean laughed.

"Why, there hain't much to tell I went to Jack with the story an' him an' me shadowed Potter and that chum of his, he brung in. Loomis the Huntsville man, who helped make out the papers, was our man. The papers had to be left to be recorded, and Jack here'll see they are set aside, an' that these fellers git what they deserve."

"And we can stay on in our homes?" Marshall's wife asked.

"Course you can. It was a bold move, to make some ready money. The rascals 'spected to deed the places back to you, for a good sum, all they could squeeze out of you. They didn't dare to take it into court. The law looks out for easies like you-alls."

Not until the Holts were alone did Samuel turn to his wife. He tried to smile. "How it is, Minnie? Be you mad at me? Mad 'cause I made you a prisoner o' war, 'long o' Potter?

She threw herself into his arms. "Oh, Mark! I'm so grateful to you. None of the women know you had to lock me up; they think I had sense like you. It's our farm and our house always, Samuel."

THOUGHTS ON LIFE

If you have half an hour to spare don't spend it with someone who hasn't.

Don't simply see how you can "put in the day." See how much you can put into the day.

Never contrive to make it easy for your concern to get along without you

---

APPRECIATED "WHISPERING SMITH"

The publication of the following letter needs no explanation nor no apology. We are pleased not only with the compliment the writer pays to Pennsylvania Farmer but with his fine discernment and appreciation of the characters of Whispering Smith. We who have always lived in the quiet, protected seclusion of the East are sometimes inclined to think the tales of frontier life are probably mere creations of an unlimited imagination. This aged correspondent has had first hand information and has known characters and happenings which most of us never knew and never will know.

—Editors.

Editor Pennsylvania Farmer:

On the 15th of next month I will complete my 85th year, so I feel that if I don't now offer the word of praise I feel is due you, I may not be able to do so at all.

I am a subscriber to—(here he names six other well-known farm papers), and "The Pennsylvania Farmer," and wish to say that yours is the most practical and helpful paper I read.

I have two sons, each owning a farm and am especially interested in fruit. I have read, I think, everything published on fruit growing, and feel that your correspondent, Mr. J. P. Stewart, is the most instinctive and helpful writer on the subject I have read.

In October, 1865, I went from the central part of Pennsylvania to southwestern Missouri on the border of S. E. Kansas and N. E. Indian Territory, now Oklahoma. Lived there twelve years—those were the days and the tramping ground of the James boys and the Younger brothers and I was enough in contact with rough conditions to give me an intense interest in the "Whispering Smith" story. I know one man akin to Whispering Smith, and several like McCloud, and one woman like Marion—so reading the story was something like living my life over again.

A highly expert gunman is like what they say of the poets—he is born not made. He is a wonderful combination of nerve, will, and loyalty to conviction as to his duty. Courage alone, without this conviction will not sustain him—his body must be absolutely obedient and instantly responsive to his will. There is with him no lost motion or misdirected movement. As in the slight of hand trick, the move must be quicker than the eye. He does not take aim—his gun is like a part of his hand, and he shoots just as you would point a finger. The first thing you know, he has drawn in the flash, and you hear the report of a gun. He seems intuitively to know what move his adversary will make, and get to it first under any circumstances that may arise. Others may not know where he is or when he will arrive, but when the critical moment arrives he is there. He is quiet, soft spoken, never blusters, or boasts, never gloats over his victories. He does what is demanded of him, and says nothing. Without such men as well as the McCloud type, the great West would have been the permanent abode of only the criminal class. I would if it were possible, put a wreath of immortelles on the grave of Whispering Smith.

Sinclair is an example of what a man capable of great usefulness and of making an honored place among men for himself, will be driven to by cherishing a grievance. I have wondered while reading the story if a McCloud with his unusual personality had been able to see more deeply into Sinclair's nature, and had attempted to do so, might not have by a course taken to win his confidence and impress him with the certain doom of his course might not have won him to better things. The unfortunate disposition in those disposed to nurse a grievance is to regard every demand made on them as punishment imposed, and in no way due to their wrong doing.

The James Boys and the Youngers, were just that kind of men. They were brought up in a Slave State in days of Kansas border troubles. They in the midst of excitement came under bad influences. The older members of their families were mistreated and made to suffer. Then came the Civil War and their families suffered more. When they came home they were regarded with suspicion and they took upon themselves the task of getting even with those they adjudged guilty of abusing their parents. Then they were branded as outlaws, and they retaliated upon the society that outlawed them. Every time their band was hurt in a raid, or an effort was made to capture them, they regarded it as a new grievance. They all came to a bloody end, except Frank James. He, after arrest and imprisonment, seemed to see the folly of their course, settled down at Independance, Mo., and lived for years a quiet, lawful life and died respected. As I read, I fell in love with Marion and Dixie. The writer of that story knew conditions in early times of the West. I had a Bill Dancing in my acquaintance also—but enough of this!

Go on with Pennsylvania Farmer. I feel altho, that long delayed, the farmer is coming into his own.—W. A. S., Cumberland Co., Pa.

INCENTIVES TO WORK

Don't you like to get a hold of a new shovel or spade or hoe that hangs just right? I do. It seems to do the same amount of work easier and quicker and makes one less weary than the old one. Did you ever notice that a team will seemingly pull better when the harness is just oiled and cleaned? It seems to me they will and that even the plow works better when the harness is in tip-top shape.

When you were in school do you remember that you could write a better composition and liked to write it far more if there was a new pen point or a new pencil do make the work easier? That is the way it is with me yet. Today when I get a new ribbon on my typewriter it seems to increase the speed of the machine about 25 per cent and the work it does is better of course.

And where does this get us farmers? I seem to have the same feelings about the farm work that I used to when I was a kid. When everything I work with is in tip-top shape I feel better, the team feels better and we all do more work I am sure.

Rainy damp days take the tuck out of us and we let our work slump. On rainy days it is bad policy to solicit money for a church or any community activity. But when the sun comes out it is the proper time to go after it. Barbers tell me that the best business comes on the sunshiny days. When it is muddy and damp people don't care a rap how they look. So let their hair grow another day or so and forget to shave.—H. Rogers.

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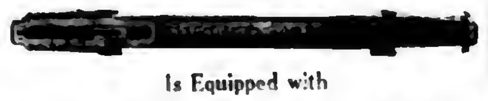

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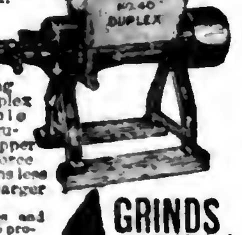

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Markets

NEW YORK PRODUCE

—Nov. 20, 1920.

Butter.—Receipts, 2671 tubs. The market ruled firm on high-grade goods, which were scarce. Demand, however was only of a jobbing character. Supplies were chiefly of medium and low grades, which were hard to move and irregular in value. Solid-packed creamery, fancy, high-scoring goods, 67@69c; the latter for jobbing sales; extra, 66c; extra firsts, 62@64c; firsts, 47@56c; seconds, 37@44c; sweet creamery, choice to fancy, 66@70c; fair to good, 57@67c; ladle packed, as to quality, 32@37c; packing stock, 25@30c; fancy brands of nearby prints were jobbing at 75@77c; good to choice, 65@74c; fair to good, 62@64c.

Eggs.—Receipts, 625 cases. Strictly fine, fresh eggs were scarce and firm under a good demand. The bulk of the supply, however, was of more or less unattractive stock, which sold slowly and ruled weak. We quote the following: Nearby firsts, 82@84c per doz.; nearby current receipts, 80c per doz.; nearby ordinary to fair, 70@76c; western, extra firsts, 82@84c; firsts, 77@80c; inferior lots lower; jobbing sales of fancy candled fresh eggs, 93@94c fair to choice, 85@92c.

Cheese.—Ruled firm with demand fairly active. We quote: New York, whole milk, flats, fancy, held, 27½@28½c; do, fair to good, held, 25@27c; do, fancy, fresh, 24½@25c; do, common to fair, fresh, 22@24c; longhorns, held, 28@28½c; do, fresh, 28@28½c; single daisies, held, 28@28½c; do fresh, 27@28c; jobbing sales of fancy held goods, 30@31c.

Vegetables. — Potatoes moving rather slowly, but country advices firm and holders asking full late figures. Sweet potatoes more or less damaged by cold weather, and dragging at irregular prices. Maine, 180-lb., $4@4.50; L. I., bbl. $4.25@4.75; sweets, Jy., 1s bskt. $1.50; Brussels sprouts, state qt., 10@20c; beets, nearby, bbl. $2@3; carrots, nearby, 100, $1.50@2; celery, state, bch., 15@65c; cabbage, bbl. $1@1.50; per, 100, $2@4; cauliflower, nearby, crt. $1@5; garlic, lb., 6@12c; onions, state and Wisconsin, red, $1.25@1.75; onions, white, bag, $1.50@2.25; peppers, nearby, bskt. 75c@$1.75; pumpkins, cheese, $1.50@2; spinach, nearby, bskt., 75c@$1.25; squash, Hubbard, bbl., $2; turnips, white, bag, $1.25@1.50; Rutabaga, bbl., $1@1.75; bag, $1@1.75.

Fresh Fruits — Apples, bskts., fancy, $1.25; bbls., York Imp., $4@5; Black Twig, $4.50@5; S. Winesap, $4.50@5; Baldwin, $3.50@4.50; N. Spy, $3.50@6.50; Jonathan, $5@7; 20-Ounce, $2.50@5; Greening, $3@5. Pears, Kieffer, $2.50@4.50; Lawrence, $4@5; Clairgeau, $6@7; Anjou, $5@6; Seckel, $6@9; cranberries, E blk. bbl., $11@13, do poor, $9@11; Avocada pears, Fla., fancy, box, $15@18.

LANCASTER PRODUCE

Nov. 22, 1920.

Asking prices on market this morning for eggs varied from 85 to 88 cents a dozen with the majority of sales at the low figure. A sprinkling of rabbits were in evidence but were soon sold at prices from 50 cents to $1 according to size and dressing. The quotations:

Butter and Eggs.—Country butter, 70@75c lb.; creamery butter, 80c lb.; fresh eggs, 88@95c doz.; duck eggs, 90c per dozen; goose eggs, 8@10c each.

Poultry.—Chickens, $2@2.25; broilers, $1@2; squab, 50c@$1.

Vegetables.—Parsnips, 10c box; spinach, 15@20c ½-pk.; turnips, 30c ½-pk.; peppers, 2@3c ea.; cucumbers, 5c ea.; potatoes, 20c ½-pk., $1.20@1.25 bushel; sweet potatoes, 30@40c ½-bu.; cabbage, 5c head; cauliflower, 15@20c head; lima beans, 25c pint; onions, 10c box; red beets, 5c bch.; beans, 30@40c ½-pk.; rhubarb, 3@5c bch.; tomatoes, 10@15c box.

Fruit—Peaches, 10@15c qt. box; apples, 15@20c ½-pk.; pears, 25@30c ½-pk.

Miscellaneous. — Cider, 40@50c gallon; hominy, 12@15c pint.

PHILADELPHIA LIVESTOCK

—Nov. 20, 1920.

Receipts for week ended Nov. 20:

	Beef cattle	Sheep & lambs	Hogs.
Totals week....	2148	8974	10367
Previous week..	2744	11450	10237

Calves—Receipts of calves were 1631 head as against 1793 previous week.

Beef Cattle.—There was little activity in the market for steers and cows and no important change in prices. Supplies were sufficient to cover the requirements of the trade. Veal was dull and prices of some kinds were lower. Buyers were operating cautiously and supplies were in excess of requirements. Quotations: Steers, good to choice, $12@[illegible]; fair to good, $10.50@12; common to fair, $9@10.50; cows, western, good to choice, 8@9c; do, fair to good, 7@8c; bulls, 5½@8c; calves, extra to choice, $19@19.50; fair to good, $16@18; common, [illegible]@13.50; Tennessee, $16@[illegible]; other southerns, $7@11.

Sheep and Lambs—The market for sheep was about steady with demand fair for desirable stock. Lamb was dull and lower, due to more liberal offerings and increased pressure to sell. Quotations: Sheared sheep, wethers, extra, $7@7.50; do, good to choice, $6.50@7; medium, $5@6; do common, $2@3; ewes, heavy, fat, $5.50@6; lambs, spring, choice, W. Va., $12.50@13; choice Pa., $12@12.50; medium, $10.50@11.50; common, $8.50@9.50.

Hogs.—Receipts were liberal and the market was quiet and easier under bearish outside advices and increased pressure to sell. We quote: Best western, $15; nearby, $13@13.50.

City Dressed Stock.—The market for steers, heifers and cows was dull with supplies ample for the limited requirements of the trade. Veal and mutton were quiet and unchanged. Lamb was dull and lower. Hogs sold slowly and prices were slightly easier. We quote: Steers, 17@24c; heifers, 14@18c; cows, 10@16c; calves, city dressed, choice, 29@31c; calves, country dressed, 26@28c; lambs, spring, choice, 27@29c; sheep, 10@18c; hogs, 22½c.

PITTSBURGH HAY AND GRAIN

Nov. 20, 1920.

While billings of hay in transit seem to be heavy, nevertheless, on account of the modified embargo on the Penna. R. R., receipts are only moderate. All arrivals are bringing quotations. There is no accumulation here on timothy or clover mixed hay but it is difficult to dispose of arrivals of prairie which have been more than the market can take. Would advise our shippers to go slow on prairie hay at least for the present. Receipts of straw light and are not equal to the requirements. Buyers are in the market on account of the near approach of cold weather. All arrivals being readily placed and market eager for more. Oats and ear corn dull. Market on these commodities looks weak. Quotations: No. 1 timothy, $31@32; standard timothy, $29@30, No. 2 timothy, $27@28; No. 3 timothy, $23.50@24.50; No. 1 light clover mixed, $28@29; No. 1 clover mixed, $31@32; No. 2 clover mixed, $27@29; No. 1 clover, $31@32; No. 2 clover, $25@28; No. 1 oat straw, $17@17.50; No. 2 oat straw, $16.50@17; No. 1 wheat straw, $16.50@17; No. 2 wheat straw, $16@16.50; No. 1 rye straw, $17@17.50; No. 3 rye straw, $16.50@17; No. 2 white oats, 58@58½c.

NEW YORK HAY AND GRAIN

—Nov. 20, 1920.

Feed.—The market for mill feed was inactive, and while prices were nominally unchanged it was intimated that sellers might accept slightly lower bids owing to the general weakness in all the grain markets.

Quotations: City feed bran, $43; middling, $44, in 100-lb. sacks; red dog, $70, nominal, in 100-lb. sacks; Western spring bran, $42; standard middling, $41; flour middling, $52; red dog, $65, all in 100-lb. sacks, 30-day shipment. Oat feed, $22; rye middlings, $39; white hominy feed, $45, all in 100-pound sacks. Cottonseed oil meal, $51.50; linseed oil meal, $51, in 100-lb. sacks.

Hay and Straw.—There were 49 cars in the yard at 33d street shed this morning. New invoices by rail are light but there is considerable hay in transit by boat, buying is very limited and the market is weak and tending downward. Rye straw in liberal supply and weak. Oat straw steady. Wheat straw easy.

Hay.—Large bales, Timothy No. 1, $39@40; No. 2, $36@38; No. 3, $33@35; clover mixed, No. 1, $35@37; No. 2, $30@32; clover mixed, fancy, $37@38; No. 1, $34@36; No. 2, $28@31; straw, large bales, No. 1 rye, $22; No. 1 oat, $17.

Wheat.—No. 2 red, c i f, $1.98; No. 2 hard winter, $1.98.

Corn.—No. 2 yellow, 99c; No. 2 mixed, 97c; No. 2 white, 98c.

Oats.—No. 1 white, 62c; No. 2 white, 61½c; No. 3 white, 60½c; No. 4, 59½c; ordinary white clipped, 62½@63c.

Rye.—C i f, $1.68¾. Barley, c i f, malting, $1@1.04; feeding, 90@94c.

PHILADELPHIA HAY AND GRAIN

—Nov. 20, 1920.

Baled Hay and Straw.—Receipts, 72 tons of hay and 1 car of straw. Quiet but steady. We quote: Timothy hay, No. 1, none here; No. 2, $29@30; No. 3, $27@28; sample, $22@24; no grade, $18@20; clover-mixed hay, light mixed, $29.50@30; No. 1 mixed, $27@28; straw, No. 1 straight rye, $21@21.50; No. 2, $19.50@20; No. 1 tangled rye, $17.50@18.50; No. 2 do, $17@17.50; No. 1 wheat straw, $17@17.50; No. 2 do, $16@16.50.

Bran.—Sold slowly at recent advance. We quote: Car lots, including sacks, soft winter bran in 100-lb. sacks, per ton, $43@43.50.

Oats.—We quote, No. 2 white, 62½@63c; No. 3 white, 61½c.

Wheat—Market further declined 6@9c. No. 2 red winter, $1.96@2.01; No. 2 red winter, garlicky, $1.85@1.90. Other grades were quoted at the following schedule of discount: Mixed wheat, 5c under No. 2; No. 3 wheat, 5c under No. 1; No. 4 wheat, 7c under No. 2; sample, according to quality.

Corn.—Corn further dropped 4c. Quoted at $1.06@1.08, the latter for No. 1 yellow.

PHILADELPHIA DAIRY MARKET

—Nov. 20, 1920.

Butter.—Receipts, 2671 tubs. Fine butter was scarce and firm, though trade was quiet, business being entirely of a jobbing character. We quote: Solid-packed creamery, fancy, high-scoring goods, 67@69c; the latter for jobbing sales; extra, 66c; extra firsts, 62@64c; firsts, 47@56c; seconds, 37@44c; sweet creamery, choice and fancy, 68@70c; fair to good, 57@67c; ladle-packed, as to quality, 32@37c; packing stock, 25@30c; fancy brands, nearby prints were jobbing at 75@77c; good to choice, 65@74c; fair, 62@64c.

Eggs.—Receipts, 625 cases. The market for strictly fine fresh eggs ruled firm under small supplies and a good demand. Supplies, however, were mostly of more or less unattractive stock, which sold slowly and ruled weak. We quote as follows: Nearby firsts, 82@84c doz.; nearby current receipts, 80c doz.; nearby ordinary to fair, 70@76c; Western extra, firsts, 82@84c doz.; do firsts, 77@80c doz.; inferior lots lower; fancy, carefully selected candled fresh eggs were jobbing at 93@94c; fair to choice, 85@92c.

Cheese.—Sold fairly and ruled firm under light offerings. We quote the following prices: N. Y. whole milk, flat, fancy, held, 28@28½c; do fair to good, held, 25@27c; current make, fancy flats, 25@25½c; do common to fair, 22@24c; Longhorns, held, 28½@29c; do fresh, 28@28½c; single Daisies, held, 28@28½c; fresh, 27@28c; jobbing sales of fancy goods, 60@31c.

TOBACCO MARKET

—Nov. 22, 1920.

There has been little activity in local tobacco situation since the election. Apparently buying interests believe that all sorts of produce will be subjected to a toboggan slide, but in leaf tobacco, reductions are not practical nor at all probable. Decreases are only consistent in instances where a product can be replaced for less than price asked, which is not the case in this instance as another crop could not be grown for less money than is being asked for this one. Buyers insist on a scale of prices ranging from $20 to $25 per cwt. and will not pay more.

At a meeting of the growers' association it was shown that few crops have been bought during recent weeks and those at a price and under conditions which showed conclusively the determination to decrease prices by various manipulations. Supporting the belief that the present crop is not excessive, a report was read showing that the amount of Penna. tobacco on hand on Oct. 1 was 87,730,000 pounds as compared with 91,690,000 at the corresponding time last year. It was also shown that factories improved 67,000,000 pounds during the year. With this situation it is evident that the demand is equal to the supply on hand and that the present delay is for market effect only. It was proven that during the war six of the largest factories have flourished as never before, increasing their capital stock from 40 to 200 per cent. At the same meeting a resolution was passed denouncing those who reported the present crop as pole turned and otherwise damaged.

YORK PRODUCE

—Nov. 22, 1920.

All lines of fall produce are off, the markets on account of the heavy frosts of the past week. The quality of the apples shown is greatly increased, and already there is a demand for picked fruit. Potatoes have also been sold pretty close, many of them being shipped the past two weeks all along the Baltimore line.

Eggs.—85@95c per dozen.

Butter — Country, 65@70c lb.; separator, 70@80c lb.; milk, 14c quart.

Poultry — Hens, 28@32c lb.; dressed, $1, $2.75 ea.

Vegetables. — Potatoes, 15@25c ½-pk.; $1@1.40 bu.; cabbage, 2@8c head; lettuce, 5@15c hd.; radishes, 6c bch.; onions, 5c bch.; 18@25c ½-pk.; beets, 5c box; peppers, 10@15c doz.; soup beans, 25c qt.; squash, 3@5c ea.; ham, sliced, 45@96c lb.; whole, 40@45c lb.; lard, 25c lb.

Fruit — Apples, 10@50c ½-peck, Delicious, being the highest seller; pears, 15@40c ½-pk.; tomatoes, 1@7c ea.; 15c box.

Retail Grain Market — Wheat, $2.50; corn, $2.50; oats, $1; rye, $1.75; bran, $2.60 cwt.; middlings, $2.70 cwt.

Wholesale Grain Market—Wheat, $1.75; corn, 90c; oats, 50c; rye, $1.40; bran, $48 ton; middlings, $52 ton.

LIVESTOCK MARKETS

PITTSBURGH

Hogs — Receipts, 4500; lower. Heavies, $12.50@13; heavy and light yorkers and pigs, $13. Sheep and lambs—Receipts, 1500; lower. Top sheep, $7; top lambs, $12. Calves—Receipts, 300; lower; top $17.50.

CHICAGO

Cattle. — Receipts, 8000; beef steers grading medium and better steady to strong; spots higher; some clean-up sales common and range steers lowest.

INTERSTATE MILK PRICES

—Nov. 20, 1920.

October prices prevail.

STATE CORN SHOW TO BE OPEN TO WORLD COMPETITION

The Pennsylvania State Corn Show held in connection with the Annual Farm Products Show, will this year be open to the competition of the entire world. For the first time the bars will be let down to corn growers outside of Pennsylvania and the Sweepstake winners in the Pennsylvania competition will be matched against ten ear exhibits from any state in the Union that cares to exhibit.

A prize of $25 will be awarded the winner of this world class and it is believed that more than a dozen states will endeavor to wrest the honors away from Pennsylvania.

The Fifth Annal Farm Products Show will be held at Harrisburg, January 24-28 and will easily be the greatest exhibition of agricultural products ever shown in Pennsylvania. Already farmers and farm bureaus from every section of the state have announced their intentions of entering their choicest products of field and orchard at the show. Many of these exhibits have already won honors at the county fairs and agricultural expositions, so that the show will really bring together the prize winning products from each community.

The Corn Show alone will be a feature of no small magnitude. In order to secure more even classification and judging of the corn, the state has been divided into five districts. The winners in these districts, together with the honorary classes, will compete for the sweepstake prizes, which in turn will compete with the entries from other states in the world class.

In each of the districts, the prizes will be the same. Five cash prizes, $5, $3.50, $2.50, $2 and $1 will be offered the winners in each of the four varieties—Yellow Dent, White Dent, White Capped Yellow Dent and Flint, except that there will be no prizes offered for the Flint variety in the Fifth district.

The counties are arranged in districts as follows:

District No. 1—Bucks, Chester, Delaware, Lancaster, Montgomery, Philadelphia and York counties.

District No. 2—Adams, Berks, Cumberland, Dauphin, Franklin, Lebanon, Lehigh, Northampton and Perry counties.

District No. 3—Armstrong, Beaver, Bedford, Blair, Butler, Cambria, Center, Clinton, Columbia, Fulton, Huntingdon, Indiana, Juniata, Lawrence, Lycoming, Mercer, Mifflin, Montour, Northumberland, Schuylkill, Snyder, Somerset and Union counties.

District No. 4—Bradford, Cameron, Carbon, Clarion, Clearfield, Crawford, Elk, Erie, Forest, Jefferson, Lackawanna, Luzerne, McKean, Monroe, Pike, Potter, Sullivan, Susquehanna, Tioga, Venango, Warren, Wayne and Wyoming counties.

District No. 5—Allegheny, Fayette, Greene, Washington and Westmoreland counties.

The honorary state class consists of exhibitors who won a first premium in a district in 1918, 1919 and 1920. These exhibitors are barred from competing in the same classes in which they won either last year or the year before, but their exhibits may be entered in competition with this year's district winners for the sweepstake prizes. Four prizes of $4, $3, $2 and $1 will be offered for the winners in each of the four varieties of corn.

The grand champion prize of $10 will be awarded to the best exhibit of ten ears, regardless of variety.

A special prize of $10 will be awarded the ten ears shelling the greatest amount of corn.

Three prizes of $10, $8 and $5 will be awarded for the best exhibit of thirty ears of White Dent, Yellow Dent, White Capped Yellow Dent and Flint. The prizes will be offered for each of the four varieties.

A special prize of $5 will be awarded to the champion ear of the show, which must not be a part of any other exhibit.

In addition, the Challenge silver cup will be awarded to the county making the best exhibit consisting of ten exhibits of ten ears each. All the corn entered in a county exhibit must have been grown in that county.

Four prizes for each of the four varieties of corn grown by boys and girls under 20 years of age on July 1, 1920, will also be offered. The prizes for each of the four varieties are $3, $2.50, $2, $1.50 and $1. This class covers the entire state and will be judged also with state classes of district winners.

Fast Tractor Plowing Turns Under a Six-foot Cover Crop

While the first great advantage of fast tractor plowing is the excellent pulverization which it assures, another advantage of almost equal importance is the way it buries the trash. Here is a six-foot stand of "volunteer" oats going under in perfect shape. The plowing was done at a speed of three and one-half miles an hour.

There is no higher rank than that of worker. No title can ever make a loafer a nobleman.

There must be output before there can be income.

Keen Kutter Farming Tools for Real Farm Work

Keen Kutter Farming Tools are just the kind of tools that warm the heart of the man who uses them.

Fifty years of actual study and experience has taught us how to make them better than any other line of farming tools on earth.

Perfectly grained, hand picked handles and finely tempered steels are both fashioned to make Keen Kutter Tools look well, serve better and last longer.

The Keen Kutter zig zag tang, welds the handle to metal so firmly that Keen Kutter handles can never come loose.

Your money back if you are not satisfied, is the broad Keen Kutter guarantee.

Simmons Hardware Company

"The recollection of QUALITY remains long after the PRICE is forgotten".
—E. C. Simmons

Trade Mark Registered.

Aspirin

Then It's Genuine

Unless you see the name "Bayer" on tablets, you are not getting genuine Aspirin prescribed by physicians for 21 years and proved safe by millions. Always say "Bayer."

Aspirin is the trade mark of Bayer Manufacture of Monoaceticacidester of Salicylicacid.

Cut Your Coal Bills

USALYTE makes every gas-jet a furnace. It gives you heat where and when you want it. It uses no heat where you don't need it.

USALYTE, the heating marvel, will keep you warm on the coldest Winter day—at a negligible cost.

The coal it saves will pay for it a dozen times over the first season you use it. It is almost everlasting, safe, and free from carbon.

In two styles: for heating only or, with the new and exclusive in-built mantle, for heating and lighting.

For heating only, $1.75
For heating and lighting, $2.25
Order from your dealer or direct from us.
Take no inferior substitute.
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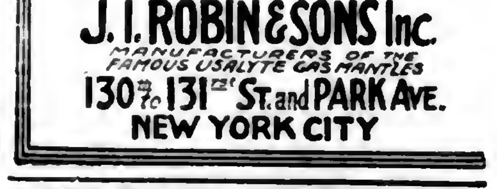
J. I. ROBIN & SONS Inc.
MANUFACTURERS OF THE FAMOUS USALYTE GAS MANTLES
130th to 131st St. and PARK AVE.
NEW YORK CITY

SAVES MONEY AND BACKACHE



FOLDS LIKE A POCKET KNIFE. ONE MAN with the FOLDING SAWING MACHINE saws down trees—saws any kind of timber on any kind of ground. One man can saw more timber with it than two men in any other way, and do it easier. Send for free illustrated catalog No. D106 showing Low Price and latest improvements. In use 30 years. First order gets agency. Folding Sawing Machine Co. 161 West Harrison St. Chicago, Ill.

Poultry

Sicilian Buttercups
Farm range, prize winning Buttercups. Investigate this wonderful variety. Write for circular. MAPLE LAWN FARMS, CORTLAND, N. Y.

LIVE POULTRY
Hay and all farm products wanted. Daily demand at good prices. GIBBS & BRO., 325 North Front St., Philadelphia, Pa. Estd. in 1844.

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter. SELBY PRODUCE CO., PHILADELPHIA

BARRON WHITE LEGHORNS. [illegible] WM. D. SEIDEL, STRAWBERRY RIDGE, PA.

Tiffany's Superior Chicks [illegible] ALDHAM POULTRY FARM, R-39, Phoenixville, Pa.

S. C. W. LEGHORN BABY CHICKS [illegible] C. P. SHIREY, STEWARTSTOWN, PA.

WANTED [illegible] WM. H. COHEN & CO. [illegible]

FOR SALE [illegible]

BRONZE TURKEYS [illegible] Elizabeth [illegible]

[illegible] Wellsville, Pa.

Special Bull Offer

Buy one in the next 30 days and we will prepay express charges and guarantee safe delivery.

You can take your choice of ten priced at from—

$50 to $150

These are young, registered Holstein bulls of good individuality, and they are sired by bulls that are out of 30 and 40 pound dams and have from eight to twenty year record daughters.

The dams of these calves are now making creditable year records.

Write for Pedigrees and Prices

WINTERTHUR FARMS
WINTERTHUR *Federal Accredited Herd* DELAWARE

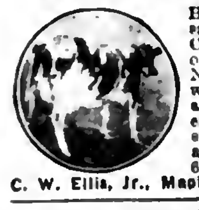
Bull Calves At Farmers' Prices

We offer farmers an exceptional opportunity to secure a "King of the May" "Golden Secret" Bull Calf at farmers' prices. This calf is from a clean, healthy, tuberculin-tested herd and is sired by Brookmeads Royal Master of Riverview No. 50363, who is a brother to Langwater Steadfast No. 31672, the bull that sold for $25,000 at the Langwater Sale, Sept. 21, 1920, the record price for the breed; is also brother to Langwater Stars and Stripes 2nd, who is Brookmead Farms' great herd sire; and grandson of Imp King of the May, who now has 30 A. R. daughters who exceed 622 lbs. butterfat; and is also sire of the famous cow Dolly Dimples May King of Langwater. Calf beautifully marked, real fawn and white. If you want a sire you'll be proud of, at a reasonable price, here's your chance.
RIVERVIEW FARMS, SWARTHMORE, PA.

Registered and Grade Holsteins

Get busy you calf club promoters. I have 50 registered heifer calves, 3 to 10 months old, $100 each for the lot, choice $125.00. 200 registered and high grade cows, heifers and bulls. Car of any age that you want. ¾-Holstein heifer calves, $20 each. Express paid in lots of 5.
J. C. Reagan, Tully, N. Y.

MAPLE LAWN HOLSTEINS,



High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.
C. W. Ellis, Jr., Maple Lawn Farms, Cortland, N. Y.

STEVENS HOLSTEIN FARM

of Cortland, N. Y., offers pure bred cows and calves, all ages; also extra high grade Holstein heifer calves $20 each, express paid in lots of 5; 2 heifer calves with purebred bull calf $75. Grade Holstein cows in carload lots. Wire me to meet you.
PAUL H. STEVENS, Prop.

FOUNDATION HOLSTEIN COWS

With A. R. O. breeding. 7 fresh, December to March, to our herd sire, Dutchland Creamelle Lunier Lad, who comes of heavy testing [illegible] dams. Our herd under Federal Supervision, never any reactors. You will find what you want at West Branch Farm. S. A. MILLER, Linden, Pa.

A BEAUTIFUL, light colored, 22-month-old heifer, Holstein, bred to grand registered bull, dam a 10,-000 lb. milk cow. Price $65.
OAKS DAIRY FARM, Wyalusing, Pa.

Reg. Holstein Bulls from calves to serviceable age. Herd tuberculin tested under Federal and State supervision. BONNYMEADS Farms, Harrisburg, Pa. R. 1

PUREBRED BROWN SWISS CALVES, for sale. Come and see the goods.
G. E. BOWN, Forksville, Pa.

3 REGISTERED Guernsey bull calves of good producers, 7 and 11 months old. B. L. BALDERSON, Mgr. Silver Lake Farm, Newtown Bucks Co., Pa.

MILKING SHORTHORNS—Young bulls, a few cows, and young heifers of the best breeding.
C. M. KENNEDY & SONS. ULSTER, PA.

GUERNSEYS

A Calf Club builds knowledge and character in your boy or girl. Let us tell you how to organize and supervise a Guernsey calf club in your community.
The American Guernsey Cattle Club
Box M 98 Peterboro, N. H.

QUALITY ECONOMY QUANTITY

Yearling Holstein Bulls

Ready for service, well-grown, and extra good individuals. They are from tested dams of Ormsby, Veeman, Lyons strains, and are sired by King Lyons Ekster Lad, a prize winning son of King Lyons, sire of nine 30 lb. cows. To make room, will be sold at bargain prices.
I. R. FOSTER & SONS, Owego, Tioga Co., N. Y.

BULL CALVES at BARGAIN PRICES

We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred, healthy bulls from a clean, Tuberculin Tested Herd at reasonable prices. King of the May—Dolly Dimple—Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees.
WAWA DAIRY FARMS, 22 S. 32nd St., Phila., Pa.

HOLSTEIN-FRIESIAN CATTLE

Bull calves sired by King Lyons Cantrilla Pontiac No. 275633, and from dams with good records, calves light in color and priced reasonable. Herd under Federal supervision. Write us your wants, we will give price and pedigree.
R. H. Fleming, Elm Brook Farm, Alba, Pa.

WANTED A HOME

for choice registered and high grade Holstein-Friesian heifer and bull calves, $25 and up. Write us your wants. Browncroft Farms, Cortland Co. McGraw, N.Y.

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Hornless Holsteins, Registered and A. R. O. animals, all ages, for sale. Federally tested.
GEO. E. STEVENSON, SCRANTON, PA.

SUNNYBROOK GUERNSEYS

40 head, free of tuberculosis, bull calves for sale.
EDWIN B. MAULE, COATESVILLE, PA.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale.
MILLARD E. BASEHOAR, Littlestown, Pa.

Reg. Holstein Bull Calves, from officially tested dams and a 30-lb. sire. Write for prices, pictures and pedigrees. Walter M. CRUTTENDEN, Forty Fort, Pa.

Ayrshire Bull Calves From high record A. R. Dams.
ROBERT TEMPLETON & SON, ULSTER, PA.

RUGGED PRODUCING AYRSHIRES

The herd has a strictly business atmosphere and they are bred for maximum production of milk and butterfat. If you admire the look of a producer, they will appeal to you as the premier show type. Our present offering is one choice bull calf from the best blood in the herd and backed by excellent records. Also a couple young cows and heifers. Herd tuberculin tested, no reactors.
CRESTMONT FARM, 31 N. FOURTH ST., SUNBURY, PA.

Bradford County, Pa. For more than a quarter of a century this county has been well known throughout America as a center for producing good livestock. Today over 250 breeders are engaged in breeding registered Holsteins, Jerseys, Ayrshire, Guernseys and Milking Shorthorns of such quality and prices as to attract the beginner or the established breeder.

There is now available for immediate sale a limited number of both sexes of the above mentioned breeds. Special Offer Now—Two Registered Holstein bulls, 1 year old, well grown, excellent type, Federal tuberculin tested. A. R. O. records, price $175 each. Address inquiries to

D. K. Sloan, Secretary, Bradford County Livestock Breeders' Association
TOWANDA, PENNA.
Office in Court House with County Farm Bureau.

PULLETS and YEARLINGS NOW READY

in S. C. Leghorns; Reds, both combs; White and Barred Rocks; White Wyandottes. Best laying strains in the country. Satisfaction assured. Quality Stock. Farms in Pa. and New Jersey.
Forest Farms, Rockaway, N. J.

Please Mention Pennsylvania Farmer When Writing to Advertisers

LIVE STOCK

COMMUNITY SWINE BREEDERS' ASSOCIATIONS

By H. H. Havner

Pure bred swine breeders in the east have found the end of the rainbow. It is the community organization. A lone course has proven to be a great handicap to the individual swine breeder. Co-operation is needed. As a good farmer said, "the community oragnization is the biggest half of the answer to the purebred hog business in the eastern states."

Why the Community?

There are certain definite things that a community organization of hog breeders can accomplish. Pennsylvania has twenty-seven groups of pure bred hog owners—each group a live organization. These communities have a progressive program outlined and things have been accomplished the past year. Some of the features of the community program are: The co-operative purchase of high-class sires, locating and purchasing brood matrons of merit, promoting boys' and girls' pig breeding clubs, taging a pure bred hog show at the community center or at the county fair, advertising as a community breed center.

Co-operative Purchase of High Class Sires

The pure bred hog business is in no sense a fad. Of most important consideration is an efficient animal machine to convert forage, grain and dairy by-products into meat. Necessarily no "scrub purebreds" should be considered. The sire, as in the case of cattle or any class of livestock, is the principal pillar of the business. How is the average Pennsylvania farmer—the owner of two to four sows—to secure the services of one of the best boars of the breed? Certainly not by individual purchase of the sire. The overhead charge for a meritorious boar to mate with two or three sows would be too large in proportion to the brood sow investment, yet it is fundamental to use a boar with the best blood lines and with the best points in conformation. Co-operative purchase of the boar is the solution. A half dozen farmers can purchase co-operatively an outstanding boar of the breed of their choice and the cost per individual will not be any greater than the money tied up in a mediocre boar—the property of one man. This past year, twenty-three groups of farmers representing twenty-two communities have purchased co-operatively twenty-three sires. Some of the best blood available has been brought into the state. Fortunately it is not all blood and no hog. These sires have won their share of the ribbons at the shows this fall.

The Brood Sow Foundation

Brood matrons of merit are also of important consideration. A breeder will be disappointed in the outcome if the entire burden of producing efficient pork machines is placed upon the boar. Pennsylvania community organizations have, on the whole, been very discriminating in the purchase of females. Too much care cannot be used in making a selection for a brood sow foundation. One hundred and sixty-two pure bred brood sows—some of this number of exceptional merit—have been added to the herds of community members the past year.

Promoting Boys' and Girls' Pig Breeding Clubs

The fostering of a boys' and girls' pig breeding club constitutes a part of the swine promotion program in a number of the communities. Breeders have found it advantageous to interest the new generation in their favorite breed of hogs. It is usually planned that the boys and girls have the "round-up" of their pigs on the date of the Community Hog Show. It is interesting to note that some of the boys, who started as pig club members a few years ago, are now taking an active part in the adult Community Organization.

Community Hog Shows

This past fall has marked a series of community hog shows—the extent of which has never been reached before in this state. Twenty-five different communities put across a first-class exhibit of hogs in twenty-five different community centers. A creditable exhibit as a community organization was made at the Butler, Forkesville, Gratz, Hughesville, Lehighton and York fairs. In addition to this community shows were staged in Indiana, two; Cumberland, Clinton, Northumberland, five; Westmoreland and Adams Counties.

The Community Breed Center

The series of fall community shows has attracted unusual interest in the respective communities as future pure bred hog centers. The community organizations that have had any surplus stock for sale have also very wisely decided to carry a regular weekly paid advertisement in a leading farm paper reaching the surrounding territory. Livestock men are watching with a good deal of interest the progress of these young organizations just out of swaddling clothes, but so far steady enough on their legs to avoid a bad tumble.

BETTER SIRES CAMPAIGN COMPLETES FIRST YEAR

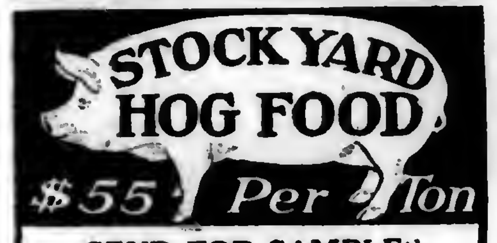
A wider recognition of good purebred sires and definite knowledge showing how they improve domestic live stock are the outstanding results of the "Better Sires—Better Stock" movement, which has just completed its first year.

During the year, 2756 persons enrolled in the movement. These persons listed with the department a total of 131,482 animals and in addition 170,030 head of poultry. According to a summry of results just made public, there is a very small proportion of inferior female stock in herds and flocks headed by purebred sires. Very few of the females are scrubs, only 2.7 per cent. With poultry the figures are still lower, 2.2 per cent. Taken as a whole the majority of female animals bred to purebred sires are grades. But approximately two-thirds of the sows are purebred; also two-thirds of all the poultry listed are of pure breeding.

The "Survival of the Fittest" in Dairy Cattle

Over in Holland, where the foundation stock of our Holstein-Friesian cattle came from, the average yield of a cow is 10,000 pounds of milk in a year. The average of cows in America is only 4,000 pounds, but that average is going up because Holsteins are everywhere showing their elevating influences. Americans are discarding the 4,000 pound cows that were costly boarders, and are replacing them with Holsteins—cows capable of abundant milk product at the lowest proportionate cost. The dairyman who is looking for profit should get all the Holstein facts from our free booklets. Send today.

THE HOLSTEIN-FRIESIAN ASSOCIATION
218 Hudson Street
Brattleboro, Vermont



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Better results come from using CONSOLIDATED DIGESTER TANKAGE and STOCK YARD HOG FOOD. Scientifically made in cleanest, most sanitary abattoir. LOW PRICES, attractive proposition. Deal direct with makers. We cannot take on many new customers this season.

CONSOLIDATED DRESSED BEEF CO.
Offenhauser Dept. B1
West Phila. Stock Yards, Philadelphia.

Booklet Free

$3.25 Box guaranteed to give satisfaction or money back. $1.10 Box Sufficient for ordinary cases. (Includes War Tax.)
MINERAL HEAVE REMEDY CO., 408 Fourth Ave., Pittsburgh Pa.

"BLU BAR HOG AND CHICK FEEDERS"
with their patented circular feeding troughs makes waste impossible.
Write for Literature and Price
The Blu-Bar Mfg. Co.
Dept. A Sycamore Ohio.

FORSALE

100 Reg. O. I. C's. of the big fancy type of the very best blood lines of the breed. Very low priced and every one guaranteed to please.
C. E. CASSEL
Hershey, Pa.

VIEWMONT FARM

Mainsville, Pa., offers choice O. I. C. 150 to 175-lb. April and May pigs from Schoolmaster boar and Callaway Edd sows. Reg. free. Shipped C. O. D.

REG. O. I. C. pigs all ages, selected stock, attractive prices.
BRUBAKER BROS., Star R., Cocolamus, Pa.

HAMPSHIRE SWINE
LOCUST LAWN FARM, Bird-in-Hand, Box 2, Pa.

FOR SALE—Reg. Big Type Poland China Spring boars and Gilts, one herd boar 2 years old, choice fall pigs. R. H. LYLE, Cadiz, Ohio.

REG. BIG TYPE POLAND CHINA pigs, $17.00 each. First of November delivery.
C. E. SECHLER, MARKLETON, PA.

Miscellaneous

HOUNDS

Fox, Coon, Skunk and Rabbit Hounds; also puppies and started dogs. Buy now and know your dog when the season opens. Stamp for reply.
H. C. LYTLE, Fredericksburg, O.

LARGE YEARLING RAMBOUILLET Rams, Shropshire rams and lambs 100 to 120 lbs. [illegible] Big type O. I. C. boars and sows. Recorded and express paid.
HERBERT C. BEARDSLEY, Montour Falls N Y

REG BERKSHIRE PIGS, both sexes for sale. [illegible]
DALTON DUDDERAR, NEW WINDSOR MD

Chester Whites and HAMPSHIRE SHEEP. Write your wants. We can [illegible] TWIN BROOK FARM Newville Pa.

PURE BRED GEESE Ducks, Turkeys, Chickens, Guineas, Dogs, Hares. Prices reasonable. Catalog free. H. H. FREED, Telford, Pa.

BEST BREEDS chickens, ducks, geese, turkeys, [illegible], hares, dogs. Stock for sale. Catalog free.
H. A. SOUDER, Box P, Sellersville Pa.

ROSECOYD FARM'S Durocs of Quality. Well kept, well bred, well fed.
J. M. STOUDT, Hershey, Pa

MILK-FED BERKSHIRE PIGS [illegible]
[illegible] Purebred Stock Farm, Grove City, Pa

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

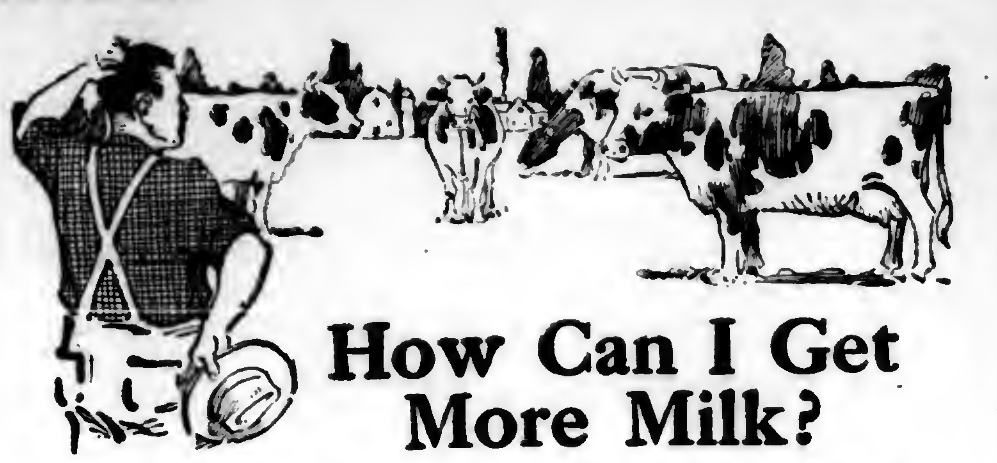
Hyperidrosis (Excessive Sweating)—About 14 months ago I bought an 8-year-old pony mare, which has since raised a colt. Altho she does not seem to be sick, she perspires almost continually and more especially when standing in stable. Her appetite for all kinds of food is good and she is now in fair flesh. A. J. C., Meadville, Pa. Excessive sweating denotes a functional disturbance of the sudoriferous glands, in consequence of which, without any external cause or in certain internal diseases, the whole surface of the body or the greater portion of, or only some portions of the body appear continuously wet. General hyperidrosis, or excessive sweating, usually develops as a secondary affection. It is met with when the blood becomes loaded with carbonic acid, following lung ailments and poor ventilation. Feeding too many pumpkins cause excessive perspiration. Clip your pony, hand rub her body, especially the part that is wet. Give 15 grain doses of potassium iodide twice a day. Change her feed and don't forget to ventilate stable. Doubtless the glands of skin are in an unhealthy condition. Keep the skin clean.

Stocking.—One of my work horses is inclined to stock in both hind legs, especially if allowed to stand in stable for any great length of time. He does his work seeming as well as ever and never refuses to eat all the feed I put before him. I feed corn, oats and corn fodder. W. H. S., Piermont, N. Y. Every horse should have some exercise daily, especially if he is of draft breed. When idle, feed less grain, keep the bowels open by feeding well salted bran mash or roots. Bandage hind legs in cotton, for two or three hours, after he has been exercised. Give a teaspoonful of acetate of potash in drinking water twice a day.

Indigestion.—I wish you would tell me what to give a cow that bloats, and if medicine fails to relieve her, tell me where to stab her to let out gas. R. M. S. Give her half an ounce of hyposulphite of soda two or three times a day. If she is in pain give one ounce doses every hour until relieved. Aromatic spirits of ammonia is another excellent remedy. After washing the left flank with carbolic acid and water, or coal-tar disinfectant and water, dry the skin, paint spot with tincture of iodine and insert the trocar or knife, of course you should select the center of the triangle, formed by the last rib, the point of the hip and the transverse process of the lumbar vertebra and at the most bloated or prominent point. Pull out the trocar and leave canula in. If you use a knife a tube should be left in until the gas ceases to flow. Cattle that persistently bloat on one particular kind of food should have a change of diet.

The higher type of man is one who acts before he speaks, and professes only what he practices.

Government is good when it makes happy those who live under it, and attracts those who live far away.



How Can I Get More Milk?

This question is in the mind of every keen dairyman anxious to keep his herd on the best paying basis. It can be answered by using more intensive methods of feeding—methods that have been approved by America's most successful dairymen. You cannot pay too much attention to this question of feeding. Upon it largely depends the health and milk flow of the cow.

International Special Dairy Feed
MIXED RIGHT — PRICED RIGHT

International Special Dairy Feed is scientifically mixed. Its formula has been O. K.'d by experienced dairymen who proved that it made more milk. For many years thousands of dairymen have used it exclusively. Give it a fair test. Put one-third of your herd on a ration of International Special Dairy Feed for three months. Can be used as an entire grain ration or mixed with home-grown grains. Then compare the milk production with results secured from other feeds. You will secure more milk than from any other mixture of similar analysis. Order a ton of International Special Dairy Feed from your dealer and start making this test at once. It means more milk. And more milk means more money.

INTERNATIONAL SUGAR FEED CO.
Minneapolis, Minn. Mills at Minneapolis and Memphis
Live Agents Wanted

Special Reduction For 30 Days—20 per cent Off on Reg. Big Type Spotted Poland China hogs, brood sows with litters by their sides, Spring gilts and boars, fine yearling boar. Fine lot of Fall pigs, 22 from two sows, prize winners at the Ohio State Fair.
Remember the blood of that grand old champion, O. and K.'s Pride 30th is in this herd. Send in your order at once and get the best for less than anywhere else, with this reduction off.
H. C. KYNER, Shippensburg, Pa. R. No. 4

REGISTERED O. I. C.'S
All ages. Bargains in bred gilts and boars of all ages. We are overstocked and the price is right.
ELM GROVE STOCK FARM,
Cortland, N. Y.

25% Reduction on all Durocs
to close out quickly. No stock excepted. Excellent opportunity to improve your herd at right prices. State wants quickly.
H. ED. BARCLAY, R. D. No. 4, Somerset, Pa

REGISTERED DUROC Jersey Boars for sale. Ready for service; also fall pigs eight to ten weeks old. Also booking orders for Spring gilts to be shipped when safe with pig. Prices low. Big type. Best of blood lines. Write
C. E. VEAK, CANANDAIGUA, N. Y

REGISTERED DUROCS—Fall pigs both sexes for sale. Also a few mature animals including a good boar. Good breeding. Right type.
Northumberland Co. Duroc-Jersey Breeders' Assn.,
J. M. Fry, Corresponding Sec'y, Sunbury, Pa.

REG. DUROCS Large size, heavy bone, best blood lines, prices reduced for fall. Satisfaction guaranteed.
JOHN W. COX & SON, New Wilmington, Pa.

DUROC BOARS ready for service. Bred gilts that will make something fine. Fall pigs, either sex.
B. H. SAGER, BASIL OHIO

HAMPSHIRE HOGS. Limited [illegible] offering some choice individuals 2 to 6 mos. old, both boars and gilts. F. W. Foelsanger, Chambersburg, Pa.

CHESTER WHITES For Sale. Service boars and young pigs, all ages.
ALLAN R. MORTON, ASHVILLE, N Y

BERKSHIRE PIGS [illegible] 2 year sire. Also service boars.
G. E. TANGER, [illegible] Springs, Pa

REG. O. I. C'S. all ages. Open and bred gilts at prices to move them.
Black Diamond Minorca Farm, Mt. Bethel, Pa.

O.I.C. Swine We have some bargains at present in young pigs and service boars. Will close them out very cheaply before going into winter quarters.
ELM GROVE STOCK FARM, Cortland, N. Y.

REGISTERED DUROC-JERSEY PIGS
$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs.
C. W. Ellis Jr., Maple Lawn Farm, Cortland, N. Y.

REG. BIG TYPE old-fashioned spotted Poland Chinas of quality. Am offering a few choice sow pigs bred from a half brother to a $21,000 boar. Both sons of noted sire King Lear, a 1000-lb. boar. Write for prices.
G. CLYDE THOMPSON,
Chambersburg, Pa., R No. 10.

CRYSTAL SPRING STOCK FARM, Seelyville, Pa.
Offer 30 registered Berkshire gilts of April farrow weighing 185 to 200 pounds, by Symboleer's Masterpiece the wonder boar and son of our American Champion Symboleer's Junior. 2 boars suitable to head the best herds anywhere.

FOWLER'S PURE BRED HAMPSHIRES
Will please you.
Best and largest herd in East.
THE FOWLER FARMS, MACUNGIE, PA.

Reg. Berskshires with size and quality; long bodies, good in back and [illegible]. Fall pigs and bred sows.
NEARBY STOCK FARM, POTTSGROVE, PA.

CHESTER WHITE PIGS—A fine lot now ready to ship, either singly or in pairs.
R. L. MUNCE, Canonsburg, Pa.

PIGS FOR SALE Berkshire and Chester White cross, 6 weeks old, $10 per pair C. O. D.
Threemile Island Farms, York Haven, Pa.

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, Center Valley, Pa.

NELSON'S BERKSHIRES Fall pigs, $10 ea. Some now sired [illegible] pigs and boars [illegible] each.
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Big Type Poland China [illegible] Chief Lad, a grandson of Mountain Giant [illegible]. Papers furnished on guarantee. J. S. Funston, Amberson, Pa.

75 Head Registered Duroc Jersey Hogs at PUBLIC SALE
December 2, 1920 at Slaty Ridge Farm
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Pathfinder's Ripper [illegible] young boars in the East heads my herd. This boar [illegible] inches [illegible]. Any breeder or farmer wanting size and type [illegible] *Pathfinder* No. [illegible] by *Great Sensation* No. 228725. [illegible]

Offering [illegible] *Duroc* [illegible]

SLATY RIDGE FARM, J. Elmer Long, Palmyra, Pa., R. No. 1

ALWAYS RELIABLE

Gombault's

CAUSTIC BALSAM

SURE IN RESULTS

THE ACCEPTED VETERINARY AND HUMAN REMEDY

A RELIABLE, safe and active blister and counter irritant--is used successfully by the very best stockmen everywhere. The very fact that it is both "reliable and safe" for anyone to use is of particular interest especially to those who are not veterinarians or within reach of one; and when you consider that many of the veterinary surgeons are buying and using it, you can well believe it is a valuable and reliable veterinary and household remedy.

NOT ONLY SEE WHAT OTHERS SAY, BUT SATISFY YOURSELF BY TRYING IT

CAUSTIC BALSAM
AS A HUMAN REMEDY IS
Penetrating — Soothing — Healing

It is generally true that an external remedy that is good for the animal is also good for the human body, and **Gombault's Caustic Balsam** is no exception to this rule. In fact, we sincerely believe that there is no liniment or external remedy on the market that is as good or as safe and reliable to apply to the human body as **Caustic Balsam.** We can safely recommend it in all cases where an external application could benefit. It is also cheaper according to cost because it requires very little and that little is effective.

A Safe and Reliable Germ Killer

Caustic Balsam, applied at once to any bruise or flesh wound, as soon as it stops bleeding and is thoroughly washed, will prevent blood poison and cause it to heal at once with scarcely any soreness. Persistent, thorough use will cure many old or chronic ailments, and it can always be used on any case that requires an external application, with perfect safety, and good results.

Veterinary surgeons use Caustic Balsam. Many recommend it. Why? Because it is a safe remedy for their customers to use and it brings satisfactory results.

Never Failed To Do Its Work

I am in the saw mill business and keep from twenty to thirty head of stock all the time. I have been using your Gombault's Caustic Balsam for the last ten years and I have tried it for every known lameness and it has never failed to do the work yet. I have cured sweeny and never take them from the wagon. I have tried it on every one's works with good results. Hoping this will be some benefit to some stock owner,
Clarence J. Henley, Maplesville, Ala.

Information on special cases freely given. The accepted Human and Veterinary Remedy of the World.

Sure Cure For Rattle Snake Bites

Have used Gombault's Caustic Balsam for years and wouldn't be without it. It will not only do what is claimed for it, but it is also a sure cure for rattle snake bites, if taken in time. We have saved two horses and one cow with it. Thought you might want to put this in your list of cures, as so many use Caustic Balsam. It might save them a horse or cow some time if they knew about it.
S. H. Felt, Hartford, Michigan

Caustic Balsam will absolutely remove all poisonous secretions and create a healthy action.

Caustic Balsam Does More Than Claimed for it.

Enclosed please find draft for which send me one dozen bottles of Gombault's Caustic Balsam. I have been using your Caustic Balsam for four or five years and it does more than you claim for it. A neighbor, Mr. Seegar, had a horse with a bad case of sweeny. He could not sell the animal for $25.00. I advised him to use your Caustic Balsam and he did so, curing the horse, and has since refused $100.00 for her. My niece had her knee badly injured by falling from a wagon. The doctors failed to effect a cure and she began using Caustic Balsam. She is now practically well. I have also known it to cure neuralgia and stop toothache. It is one of the finest medicines for man and beast. H. D. Sweazy, Beecher City, Ill.

Does Away With Firing

TO WHOM IT MAY CONCERN.-
I have made many fine cures with Gombault's Caustic Balsam. I have cured bowed tendons, capped hock, splints, ringbone, sidebone, shoe boil, quitter, poll-evil, fistula of withers and many other long standing cases. It is either a mild blister or a fine counter irritant; does away with firing.
E. L. Seltzer, Shelltown, Md.

Caustic Balsam Does More Than Guaranteed

I have used Caustic Balsam for the last seven years and found it just as it was recommended, and even more, because it will cure where other medicine fails and I can prove it. I can certainly recommend it. J. T. Sullivan, Chebanse, Ill.

Twenty Years Success With Caustic Balsam

After using Gombault's Caustic Balsam for twenty years I can say it has never failed to do all you recommend it to do. While it seems high to one that has never tried it, once a customer always one. I have used it for twenty years and use no other but it. W. A. McCauley, Malone, Tex.

Good For Any Cut or Bruise

I recommend your Caustic Balsam for any kind of rusty nail or barb wire cut and has also cured bad cases of blood poisoning. I am a veterinarian and surgeon and I recommend to any man this Caustic Balsam as a cure of what I said.
F. Max Scheibe, V.S., Duke, N. Mex

Gombault's Caustic Balsam
As a Liniment for the Human Body has no Equal

A Liniment that benefits; It kills pain. A home remedy for the Human Family

ALL TESTS prove the wonderful efficiency of **Gombault's Caustic Balsam** in relieving human ailments, such as Rheumatism, Neuralgia, Sprains, Sore Throat, Sore Lungs, Chest Cold, Backache, Lumbago, Diphtheria, all Stiff Joints. It is penetrating, soothing and healing, and for Old Sores, Bruises or Wounds, Felons, External Tumors, Cancers, Boils, Corns or Bunions **Caustic Balsam has no equal. It removes the soreness and strengthens the muscles**—in fact aids all troubles where an external application is necessary. **We would distinctly say to all who buy it that it does not contain a particle of poisonous substance, and therefore no harm can possibly result from its use.**

THIS GREAT REMEDY literally works wonders! It removes bunches on horses and other livestock, thereby increasing the value of the animal fully 50 percent. A successful treatment for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Windpuffs, all Skin Diseases or Parasites, Thrush, Diphtheria, Pink Eye, and Lameness from Spavin, Ringbone, and other Bony Tumors; also all obstructions in circulation, and imparts new life and vigor. It is a peerless remedy for all Throat and Bronchial Troubles.

WHY! Because Caustic Balsam can be applied by anyone with safety, will do its work well and in no way injure the horse, while other blisters need daily attention and care and then are liable to leave a blemish.

If you have a lame or unsound horse, YOU CAN WELL AFFORD TO TRY A REMEDY THAT IS SO HIGHLY RECOMMENDED.
Information on special cases freely given on request.
It is FAR SUPERIOR, MORE ECONOMICAL, and a PERFECTLY SAFE, RELIABLE and PROMPT Remedy to use as compared with any other remedy used for like purposes.
The demand is produced strictly by its merits.
IT SUPERSEDES ALL CAUTERY OR FIRING
IMPOSSIBLE TO PRODUCE ANY SCAR OR BLEMISH
IT IS THE SAFEST AND BEST BLISTER

CAREFUL FARMERS
USE CAUSTIC BALSAM
A Safe and Reliable Anticeptic

Do you turn your horses out for the winter? If so, we want to call your attention to a very important matter. Horses which have been used steadily at work, either on the farm or road, have quite likely had some strains whereby lameness or enlargements have been caused. Or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balsam, applied as per directions, just as you are turning the horses out, will be of great benefit; and this is the time when it can be used very successfully. One great advantage in using this remedy is that after it is applied it needs no care or attention, but does its work well and at a time when the horse is having a rest. Of course, it can be used with equal success while horses are in the stable, but many people in turning their horses out would use Caustic Balsam if they were reminded of it, and this article is given as a reminder.

Found Nothing That Equals Caustic Balsam

Kindly permit me to express my deep appreciation of Gombault's Caustic Balsam. I have cured sprains, ringbone, strained tendons, sweeny, poll-evil with it in fine shape and do not see how a better liniment could be manufactured. I have used many things for removing puffs from horses but have never found any that would equal Caustic Balsam. I also had a cow that had lump jaw. I used Caustic Balsam and cured it.
John H. Wallgren, Logan, Kansas

Bunches on horses or any other livestock are unsightly.

Caustic Balsam Prevents Blood Poisen

We have used Caustic Balsam for several years and have found it to be unequaled for horses or people. My husband ran a rusty nail in his hand and blood poison set in. We used two applications of Caustic Balsam and the swelling and fever left his hand and arm and it healed up without any more bother. It is also as efficient for snake bites and we would not think of being without it.
L. H. Glebe, Forest Grove, Mont.

Caustic Balsam is good for that sore feeling after baseball or football games.

A Splendid Human Remedy

I think your Caustic Balsam a splendid human remedy. We use it for cuts, burns, sores, swellings, sore throat and lameness and find it very beneficial. We expect to keep it on hand ready for any emergency.
Mrs. Robt. B. Newton, Columbus, Miss.

The world's greatest and surest veterinary and human remedy. Has Imitators, but no competitors.

Worth Its Weight In Gold

I have used Gombault's Caustic Balsam for my own horses and for others, and it has never failed yet. My little girl had rheumatism for a long time. Nothing did her any good until we used Caustic Balsam and she is all right. My wife had throat trouble and used Caustic Balsam with great results. It is worth its weight in gold.
Dr. Ira Le Dunlap, V.S., Rochester, Pa.

Gombault's
Caustic Balsam
MAY HAVE IMITATORS, BUT HAS NO COMPETITORS
PRICE $1.75 PER BOTTLE AT ALL DRUGGISTS OR SENT BY PARCEL POST.
THE LAWRENCE-WILLIAMS CO.
1013 Oregon Avenue, Cleveland, Ohio

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Getting Most From Manures

Best Methods of Hauling and Applying Manures to Utilize its Plant Foods

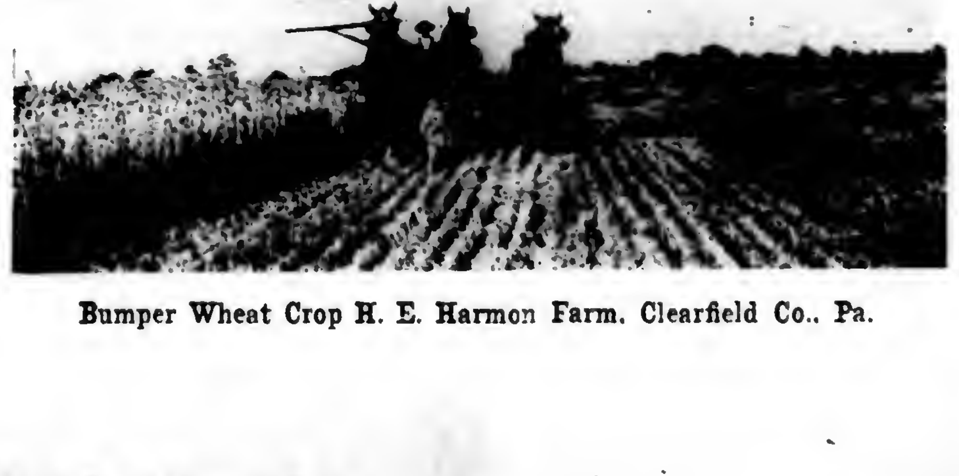
E. L. WORTHERN
CORNELL AGRICULTURE COLLEGE

In spite of the fact that much has been written on the general subject of manure and its value to the farmer, and especially on the phase regarding the loss from its improper handling, there still exists no unanimity of opinion among farmers as to the best practices in handling farm manure. Even granted that there is no best method of handling manure, nor a best crop for which it should be applied—for these details must necessarily vary—still, there are certain principles and facts that must be given careful consideration in working out the method best fitted to the individual farm. This article aims to present the fundamental information necessary for determining methods that will secure maximum returns from manure, and will enable the individual to detail the details of the method best adapted to his own conditions.

Composition of Manure

While there is naturally some variation in the composition of manure, that for the average mixed manure including bedding is sufficiently definite for all practical purposes. Such material, when fresh from the stall, contains on the average the following number of pounds of plant food to the ton: Ammonia, 12 lbs. (10 lbs. nitrogen); phosphoric acid, 5 lbs. (2 lbs. phosphorous); potash, 10 lbs. (8 lbs. potassium).

In terms of a fertilizer, manure could be considered a 12-5-10 mixture, altho only 1-20th as concentrated. That is, one ton of manure would contain exactly the same amount of plant food, and most of it readily available, as 100 pounds of a 12-5-10 fertilizer.



Bumper Wheat Crop H. E. Harmon Farm, Clearfield Co., Pa.

Alfalfa on Central New Jersey Farm

Factors Influencing Composition

In considering the composition of manure it is well to keep in mind the fact that the material is made up of three important constituents—solid excrement, urine and bedding. The relative amounts of these constituents, as well as the character of the bedding, are important factors influencing the composition of manure. The moisture content, particularly in case of exposed manure, greatly modifies the composition. From the practical standpoint these factors should not be overlooked as they are of great importance in determining the composition of manure as found on the farm.

Solid and Liquid Excrements

The solid excrement or drug consists largely of the undigested portion of the food consumed. The material has been made fine by mastication and softened by the admixture of the various digestive fluids, but in composition it is not dissimilar to the coarser material of the food from which it has been largely derived. As an average, the solid excrement contains one-third of the nitrogen, one-fourth of the potassium and practically all the phosphorous of the materials fed. There must be further decomposition of this material before the plant food in it becomes available for plant growth.

The liquid manure is composed of the material in the digested portion of the food that is rejected by the animal body. It contains two-thirds of the nitrogen, about three-fourths of the potassium, but practically none of the phosphorous. The plant food is in a readily available form and is subject to serious leaching unless properly cared for. The tabulated figures on page two furnish definite information as to the relative weight and composition of solid and liquid excrements of farm animals.

Composition of Bedding

While it is of importance to know something about the relative composition of the solid and liquid excrements, we must not overlook the importance of the character and amount of bedding as influencing the composition of manure as it is used in farm practice. The bedding influences the composition of the manure directly, depending upon its own composition as compared to that of the solid and liquid excrements, and indirectly depending upon its efficiency in absorbing and conserving the liquid manure. Plenty of high grade bedding should be used on the ordinary farm as a means of preventing serious loss from the manure.

There are various factors influencing the composition of manure. The most important are, the kind of animal, the age of the animal, the character of the feed, and the kind of work being done.

Losses From Manure

When manure is exposed to the weather it decomposes rapidly, losing the plant food by evaporation and leaching. There is also loss in weight due to the destruction of organic matter. We could expect under Pennsylvania conditions a loss of one-half in the weight of manure exposed for a six month's period. The loss of the three elements, nitrogen, phosphorus, and potassium, is in about equal proportion, altho under normal exposure, the loss of phosphorus is somewhat less than that of nitrogen and potassium. Since the loss in weight due to the destruction of organic material is at about the same rate as the loss of nitrogen and potassium, two tons of fresh manure would be required to produce one ton of rotted manure. The plant food content would be approximately the same since the loss in plantfood during exposure is proportional to the loss in weight.

Percentage of Plant Food Constituents in Fresh Animal Excrements.
(From Van Slyke, "Fertilizers and Crops")

Kind of Animal.	Excrement. Portion	Excrement. Percent	Water. Percent	Nitrogen. Percent	Phosphoric acid. Percent	Potash. Percent
Horse	Solid	80	75	0.55	0.30	0.40
	Liquid	20	90	1.35	Trace	1.25
	Mixed	..	78	.70	.25	.55
Cow	Solid	70	85	.40	.20	.10
	Liquid	30	92	1.00	Trace	1.35
	Mixed	..	86	.60	.15	.45
Pig	Solid	60	80	.55	.50	.40
	Liquid	40	97	.40	.10	.45
	Mixed	..	87	.50	.35	.40
Sheep	Solid	67	.60	.75	.50	.45
	Liquid	33	85	1.35	.05	2.10
	Mixed	..	68	.95	.35	1.00
Chicken	Mixed	..	55	1.00	.80	.40

Conservative estimates show that from one-fourth to one-third of the value of manure is lost by careless handling. The average loss is sometimes placed as high as one-half, and unfortunately on some farms only a small part of the fertilizing value of the manure produced ever reaches the fields. A clear understanding of the way in which losses take place, along with causes and means of prevention, is essential if the most is to be realized from this valuable source of plant food and organic matter.

There are three chief ways in which plant food is lost from manure. They are: 1. Direct loss of liquid manure; 2. Fermentation; 3. Leaching of plantfood. If these three great losses could be prevented, the maximum amount of plant food would be returned to the land in the manure. While it is not practical to absolutely prevent loss, manure can be handled on any farm in such a way that the loss can be so well controlled that practically all the plant food value will be recovered.

Manure Scattered in Small Piles a Wasteful Method of Application

Loss from Liquid Manure Draining Away

As already mentioned, fully one-half the plant food value of manure is in the liquid portion. This is the most difficult part of the manure to save and consequently the part from which the greatest loss ordinarily takes place.

Concrete floors with gutters draining to watertight pits or cisterns might be considered ideal from the standpoint of conserving liquid manure. However, this equipment is not practical on many farms. The generous use of bedding of good absorptive qualities must generally be depended upon for conserving the liquid manure. A concrete, or a tight board floor, is essential for holding the liquid until absorbed by the bedding. Clay floors have been shown inadequate in holding the liquid manure. A water tight floor and plenty of bedding is the practical way of conserving the liquid manure on the average farm.

It is interesting in this connection to recall that results secured at the Ohio Experiment Station show conclusively that there is a perceptibly greater loss from the manure when steers are fed on earth than on concrete floors. The difference in loss is largely in nitrogen and potash, indicating the recovery of a larger proportion of the liquid manure in case of the concrete floor.

Causes of Fermentation

Stable manure contains countless numbers of organisms known as bacteria. They are very active and under favorable conditions cause the rapid decomposition of the manure. In this decomposition, organic matter is destroyed, nitrogen is liberated and may be lost in the gaseous form of ammonia or as soluble salts leached away. The mineral plant food becomes soluble and may also be lost by leaching. The action of the beneficial bacteria of nitrification is necessary for the liberation of the plant food content of the manure, but the action should take place after the manure is spread on the field rather than when piled in the barnyard.

Fermentation is dependent on oxygen. As air furnishes this oxygen, fermentation goes on more rapidly when manure is in a loose pile. Compacting or thoro wetting lessens the rapidity of decomposition. When "hot manure" is loosely piled, sufficient heat is frequently generated to cause what is known as "fire-fanging." In this case the manure turns to a gray or ashy color. The change is similar to that of burning and the loss in organic matter and nitrogen is enormous. The mixing of cow or hog manure with the hot manure, and thoro tramping or wetting, will prevent "fire-fanging."

Rapidity of Loss Due to Fermentation

At the Ohio Experiment Station, mixed manure, including bedding, was exposed for a six months' period in a pile in the barnyard. In this time approximately one-half of the organic matter was liberated and subjected to leaching The nitrogen was also lost in the form of ammonia. A similar experiment at the New Jersey Station showed a loss of 60 percent in three months and 69 percent in a year. Realizing the almost universal deficiency of organic matter in Pennsylvania soils, we should not for a moment tolerate the unnecessary exposing of manure in the barnyard.

Losses Due to Leaching

When fresh manure is first thrown into the barnlot and exposed to the leaching of rain, the liquid portion is largely washed out and replaced by rainwater. Fresh manure and bedding from horses contains 70 per cent of liquid and that from cattle about 80 percent. Practically all of this liquid is added by the animal body and is rich in nitrogen and potash. Greater conservation of manure would most certainly result if farmers more universally appreciated the great fertilizing value of this liquid portion.

As fermentation progresses in exposed piles of manure, phosphorus, potassium and even some nitrogen accumulates in a soluble form to be carried away by the next leaching rain. It is this combined action of fermentation and leaching that progresses undisturbed for periods of several months in so many barnlots. It represents the most rapid loss of the fertilizing value of manure.

In 1890 the Cornell Experiment Station, New York, exposed a pile of horse manure weighing 4,000 and one of cow manure weighing 10,000 pounds, during the six spring and summer months. At the end of the exposure the horse manure weighed 1,730 pounds, a loss of 57 percent in weight, and the cow manure 5,125, a loss of 49 percent.

(Concluded Next Week.)

FARMERS' CONGRESS

Farmers and their wives from the Atlantic to the Pacific to the number of several hundred gathered in Columbus, O., Nov. 16-19for the fortieth annual farmers' congress. O. G. Smith, of Kearney, Neb., was president. The secretary, A. P. Sandles, Columbus, was the directing genius of the convention, with Mrs. Florence Willison, Ohio State University Extension Department, in charge of the women's meetings.

Each forenoon was devoted to sectional conferences on co-operative marketing, rural welfare, farm organizations, farm homemaking and roads. The afternoon and evening sessions were general. The Tuesday evening meeting, held at the state university, featured the boys' and girls' club winners, who were having their "week" at college. Dean Alfred Vivian, also gave his illustrated "Farmer's Trip Around the World" lecture.

Thruout all the sessions the "increasing purpose ran to crystallizing determination of farmers to get together on ways and means of marketing farm products in such "sane and orderly manner" as will result in a better deal for growers and consumers alike. O. E. Bradfute, president of Ohio Farm Bureau Federation, said that farmers do what no manufacturers would think of doing —set their products at the factory door and say to the public: "Here are our goods. Come and get them." "Farmers must at least get their wheat direct to millers."

Congressman Lever of South Carolina, "father" of the Smith-Lever agricultural college extension act, and member of the Federal Farm Loan Board pointed out how co-operative marketing will not only largely remedy farm produce distribution ills but is also the most practical means of financing farmers, because warehouse receipts will be negotiable anywhere if a well-developed farmers' warehouse system is the security.

John McSparran, master of Pennsylvania State Grange, argued for the same solution of our marketing and financing problems, and further urged the need of a co-operating national body comprising representative of each farm organization, to prevent the contradictory reaction that frequently results when different farmers' organizations "see" congressional committees, bankers or transportation interests.

J. F. Walker, secretary of Ohio Wood Growers' Ass'n., said: "We farmers must employ expert salesmen, and we will have to do it co-operatively."

"One organization to represent all farmers" was the trend of the sentiment, but what it should be was the puzzle. Farmers from sections where neither the farm bureau nor the Grange is established talked "Farmers' Congress" as their hope, but the most prevalent talk was that the farm bureau comes nearest to an ideal for a general "fathering and mothering" organization for all farm organizations.

J. B. Howard, president of the American Farm Bureau, was unable to come and so also were National Grange Master Lowell and Ohio State Grange Master Taber because of National Grange meeting in Boston.

Milo Campbell, of Michigan, president of the National Milk Producers, showed how considerable saving for farmers could be secured by discounting individual sale of products.

Rev. Warren H. Wilson, Presbyterian church director of rural life work, said that farmers must work together to combat the "soulless impersonal forces of the cities which are breaking down rural morale." Other speakers were Pres. Thompson of Ohio State University, Pres. Kenyon Butterfield of Mass. Agric. College, Geo. Livingston of U. S. Bureau of Markets, Harry Caton and Geo. Scott of Ohio Grange, Gray Silver of American Farm Bureau Federation, Evan B. Sharpless, of Avondale, Pa., and J. H. Kimble, Port Deposit, Md.

Soils and Fertilizers

Conducted by Dr. J. G. Lipman

Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

EXPERIMENT STATIONS CO-OPERATE IN THE STUDY OF THE LIME QUESTION

The American Society of Agronomy met at Springfield, Mass., on October 18th and 19th. Two entire sessions were devoted on Tuesday, October 19th, to the discussion of the various important problems connected with the use of lime on the farm. A number of Experiment Stations, as well as the Department of Agriculture, participated in the discussion and much light was thrown on the subject thru the experiments carried on by these institutions. Because of the great range of climatic and soil conditions in the United States, there is lack of agreement among investigators as to the best practice concerning lime. Some investigators hold that ground limestone of a certain degree of fineness is better than ground limestone of other degrees of fineness. Some claim that burned lime is superior to ground limestone; others hold the opposite view. On the Pacific Coast, where the soils are well supplied with lime, the use of neither ground limestone nor burned lime is of any importance. Some crops will prefer to grow on soils that are acid, while other crops require more lime for their best growth. Some investigators think that lime will release potash from its insoluble combinations in the soil; others are inclined to deny that this is the cause. These are but a few points on which investigators in the United States fail to agree. It seemed desirable, therefore, to arrange for a thorough discussion of the subject in order that it might be ascertained, if possible, to what extent the differences of opinion are due to soil or climatic conditions, or to what extent they may be due to differences in the methods employed by the investigators.

Considerable attention was given to discussing the nature of soil acidity. It is recognized by different investigators that the failure of crops to grow vigorously on sour land may be due to the acidity itself or it may be due to certain poisonous products developed in the acid soils. There are certain compounds of iron and alumina which may be developed in acid soils and which may be poisonous to crops. Hence, the composition of the soil itself and the amounts of iron and alumina in it that may be changed into soluble poisonous salts are an important factor entirely aside from the actual amount of lime needed for supplying the crop with lime and of preventing the accumulation of excessive amounts of acid. Different sides of this question were discussed by Dr. McIntire, of the Tennessee, Dr. Hartwell of the Rhode Island, and Prof. Conner of the Indiana Experiment Stations.

Another question to receive a considerable degree of attention was that relating to the relative value of different forms of lime. It is recognized that lime hastens the decomposition of soil humus. Where excessive quantities of lime are employed soil humus may be made to disappear more quickly than is really necessary for the best growth of crops. Such excessive destruction of the soil humus may lead to the wasteful use of soil nitrogen and of other plant-food ingredients. It is also recognized that burned and slaked lime is more destructive to the soil humus than ground limestone. Again, ground limestone that is very fine will cause the decomposition of soil humus more rapidly than ground limestone that is less fine. This fact need not prevent the use of any form of lime, provided that the amounts are suitably regulated. With the more caustic forms of lime, smaller applications can be made as effective as larger applications of the less active unburned limes.

The discussion included also the consideration of the relative value of magnesian and non-magnesian lime. Much light was thrown on the matter by the experimental results submitted by Professors Mooers and McIntire, of the Tennessee Experiment Station, Dr. Frear, of the Pennsylvania Experiment Station, and Prof. Blair, of the New Jersey Station.

Much has been written on the value of lime for making available soil potash, as well as soil phosphorus and sulfur. This subject was discussed by Prof. Plummer of North Carolina Experiment Station. The same subject was treated from a somewhat different angle by Prof. Lyon, of the Cornell Experiment Station. It is recognized in dealing with this question that lime stimulates the activities of soil bacteria. These in turn produce certain chemical changes which hasten the rate of solution of soil minerals and, therefore, supply a larger amount of available potash, phosphoric acid, sulfur, etc., for crop growth. The decomposition of humus by bacteria stimulated by the use of lime also serves to release plant food from the soil organic matter.

The writer of this article contributed to the discussion information gathered at the New Jersey Experiment Station. He dealt particularly with the fact that, where legumes like clover, vetches, alfalfa, etc., are incuded in the rotation, lime plays an important part in maintaining the supply of soil nitrogen and encouraging large yields. On the other hand, where the rotations consist of non-legumes only, the addition of lime seems to have been of but little value, as is indicated by experiments covering a period of thirteen years.

Still other information on lime and liming was contributed by Prof. Gardner of the Pennsylvania State College. He discussed liming as related to farm practice. Dr. True, formerly of the Department of Agriculture and now connected with the University of Pennsylvania, had some interesting data on the part played by lime in the growth of young plants.

Goose Properly Dressed for Market

Altogether, the discussion was very helpful, not only in establishing a deeper interest in the subject among the investigators at the different stations, but also in helping to clear up certain apparent discrepancies due, on the one hand, to differences in interpretation, and, on the other to differences in soil, climatic and crop conditions under which the investigators in this country have carried on their experiments.

ZINC PAINT ON FARM PROPERTY

Nowhere is good paint more essential than for farm use and owners of this class of buildings who discriminate in the quality of paint they buy will soon find they are reducing the upkeep of their property as well as protecting it better against deterioration, when they use the best quality coatings. Zinc oxide in paint is essential in such a program.

The United States Government uses large quantities of this pigment in the paints used in the Navy. This has been done for years owing to the fact that such paints give better results than can be obtained without its use. This has also been true in the case of the British Navy for more than 50 years. Specifications adopted by the Bureau of Standards of our own government provide for as high as 55 per cent zinc in paints used to cover property under supervision of the various departments.

Zinc is necessary in a good high grade paint as it makes the film tough and prevents the paint from wearing away so fast. Longer life, of course, means less frequent jobs of painting. This, in turn, reduces the effort you or your painter must devote to the task of toning up the place as compared to that necessary were paint without this pigment to be used. The saving thus effected over a twenty-year period is rather substantial.

Moreover, zinc in paint gives excellent spreading power depending upon the quantity used. This automatically reduces the initial cost of the job. Among the desirable qualities this material makes possible in paint these are included: Non-fading, and because of the finer size of particles, the pores of the surface to be covered are completely filled.

Your farm's value is often computed by its appearance. The stability of color which zinc imparts to paint keeps the original color and luster on your buildings, a matter of more than passing importance. The use of good paint increases and holds property valuation. Too much emphasis cannot be put on the prevention of deterioration. This is accomplished by the high oil absorption of zinc which fills the pores of the surface, protecting this surface against deterioration.

The progressive farmer should realize the opportunities afforded him to reduce maintenance costs, to conserve his property and enhance its value, as well, by the consistent use of zinc paint. He can buy ready-mixed paints in which this ingredient is found or he can buy pure zinc ground in oil and mix it with lead.

CARE OF TRACTOR IN WINTER

There are several considerations of great importance to the successful operation of a gas tractor on the farm in the winter time. They are proper lubrication, cooling the engine, and methods of starting in cold weather.

It is highly important to lubricate the tractor engine with the right kind of oil in cold weather. It is evident that the same heavy oil used during the summer months is not suitable for use in winter, as it will become too thick and stiff, and probably become solid. Use a grade of oil recommended by the tractor manufacturer and oil companies.

To prevent freezing and cracking of engine parts or the radiator, various compounds may be mixed with water for the cooling mixture. Tests at the State College show that a ten per cent solution of calcium chloride with water will freeze at 22 degrees, and a 25 per cent solution will freeze at 28 below. A ten per cent solution of alcohol and water will freeze at 24 degrees, and a forty per cent solution at 20 below zero. Alcohol evaporates rapidly, and a fresh supply must be added from time to time. Fifteen per cent alcohol and glycerine with water will freeze at 20 degrees and forty per cent alcohol and glycerine will freeze at 24 below zero. Kerosene is very often used in the radiator of tractors and automobiles as a cooling liquid in winter, and there is no danger in such use.

Starting a tractor in cold weather is often difficult. It may sometimes be made easy by wrapping a rag around the carburetor and hot water poured on the rag. This will assist in vaporizing the fuel. A bit of high grade gasoline in the petcocks is also a great aid.—Penna. State College News.

RESULTS OF SPRAYING

One of the several potato spraying demonstrations carried on by some of the County Agents in Pennsylvania, was located in Schuylkill County The potatoes were dug on October 18th, and County Agent Bollinger reports as follows: Sprayed, 322 bu. yield per acre, sound potatoes; rotten potatoes, per acre, 4.6; unsprayed, 200 bu. yield of sound potatoes, per acre, and 68 bu. rotten potatoes, per acre.

Sooner or later the profiteers and labor slackers will get their just reward.

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VOLUME 48 NUMBER 23

OUR JOB is to serve our readers. Whenever you are puzzled, write to us and we will help you if we can.
—The Editors.

The State Products Show

THE PENNSYLVANIA State Products Show which will be held in Harrisburg January 25-28 promises to be by far the biggest thing of the kind yet held. The floor space has been practically doubled, yet seems to be inadequate, and the public interest manifested thruout the state promises the largest attendance ever seen at a mid-winter show. The committee on program has arranged for meeting of all the state organizations and the officers of these bodies are doing all possible to make these meetings interesting and profitable. Public meetings on Tuesday and Wednesday have been scheduled and these will be addressed by Governor Sproul, State Superintendent Finnegan, and others.

The popularity which the Products Show has attained in the four years of its existence proves the need and the value of state exhibits, and at the same time proves the inadequacy of an indoor, mid-winter institution. No better argument for a state fair or exposition could be given than is furnished by the Products Show. Those who have the matter in charge know the difficulty of securing adequate show rooms and meeting rooms and the inconvenience resulting from having them staged in necessarily widely separated locations. The state should have and must have an exposition property where these institutions can grow and be properly accommodated.

The Price of Milk

AT A MEETING of the milk dealers and officials of the Inter-State Milk Producers' Association held November 26 it was agreed that the price of milk to farmers should be reduced two cents per quart. The distributors promise to pass the reduction on to the consumer, making the retail price of Grade B milk 13 cents. The spirit which prevailed at the meeting is said to have been amicable and no disposition to be unfair was evident on either side. The mutual endeavor seemed to be to do what was demanded by circumstances and in keeping with the tendency of the times.

Those who may be inclined to criticise the action of the Association officials because of the drop in price should remember that certain definite and uncontrollable conditions exist which made their action not only right but unavoidable: First, the general fall in prices which is occurring in other lines must be shared by farmers. Second, the reduction in price of feed and production costs is naturally followed by a reduction in the price of the product. Comparing the cost of certain feeds as quoted one year ago with those of today we find the following:

	1919.	1920.
Wheat bran, ton	$46.00-48.00	$42.00
Corn, bushel	1.70	.96
Oats, bushel	.82	.62
Cottonseed meal, ton....	80.00	41.50
Linseed meal, ton......	80.00	48.00
Clover hay, ton	30.00	29.00

A third factor in the situation is the condition of nearby milk markets. In New York the fight between producers and buyers is most unfortunate and the result is that larger quantities are unsold, and that surplus is within easy shipping distance of Philadelphia. Another factor is the immense stock of milk products in storage because there is no foreign market. For these and other reasons the Producers' Association could not do other than they did and the producers should accept the situation with as little criticism as possible, and above all things stick to their organization. We are well aware that certain fixed costs such as labor, taxes, insurance, etc., have not abated as yet. We know also that even if the former price had continued to prevail farmers would not have received extortionate returns, but our greatest interest lies in encouraging all members of the Association to stand loyally by the organization in times of adversity as they did in times of rising prices.

Profitable Farming

NEVER BEFORE was the question of farm profits so much discussed as it has been the last three or four years. This is probably due to the fact that the subject was also discussed in relation to all other business, and to the unusual scramble for profits in all lines of business. The world, or at least our part of it, has experienced an orgy of profit making and in many instances profits were demanded or taken without regard to production costs, service or intrinsic value. It is most fortunate that the question of farm profits should have the present discussion. Up to the present time the consuming public has taken it for granted that farming was, per se, a very profitable business, and even farmers themselves were not provided with figures to prove the contrary. In all probability the average farmer will give greater attention to this subject than he has ever done before and gauge his production accordingly. There are some lines in which there has evidently been a net loss for years, but the present agitation is bringing these to light and we expect "natural laws" and native common sense to correct the trouble.

There are at least three fundamental factors involved in profitable farming, namely: Good yields, minimum cost of production and fair prices. If any one of these factors is absent a profit can seldom be realized under ordinary circumstances, and the buying public has a right to demand that the farmer shall do all in his power to see that the first two factors have been realized before it assents to paying a profit on production. The same principle applies in all other business, and it is equally fair to demand of labor that it shall return a maximum output for its wages.

The first factor mentioned, good yields, depends for accomplishment, partly upon the farmer and partly upon climatic conditions. The effects of seasonal variation are beyond the control of the farmer in the main, but there are many things influencing yield which are wholly within the farmer's power to regulate. In addition to favorable weather conditions good yields depend upon good seed, sufficient fertility and proper cultivation. If low-yielding or poor germinating seed be planted a good yield cannot be expected even if the other factors exist, and there is little if any excuse for planting seed of unknown quality.

The second factor, cost of production, depends in part upon the yield secured, and also upon the fertility available, the lime content of the soil, and the amount and kind of labor applied. No matter how good the seed or how favorable the [illegible] a good yield is impossible, and hence the cost of production is high, if there is not sufficient available fertility present to produce a maximum crop. Another element that is frequently a limiting factor in the East is the lime supply. A recent bulletin issued by the Pennsylvania Experiment Station and which will be reviewed later shows that most of the soil of the state is deficient in lime—varying in need from a few hundred pounds to several tons per acre. The labor cost in production depends to a great extent upon the machinery and implements used. The unnecessary employment of hand labor or the use of antiquated and inefficient implements adds to the cost of production.

We have not emphasized these first two factors primarily to increase production but because they are involved in good business management, and also because there employment is due the public. It is easier and cheaper to reduce volume, when desirable, by other means than careless methods and meager supplies.

The third factor mentioned in profitable farming, adequate prices, is receiving the greatest amount of attention just now. In fact it overshadows the others in the minds of farmers, for the time being. Many plans are proposed, some of which are as unjust as they are impractical. The farmer is justly entitled to prices which will return him a fair profit after he has fulfilled the obligations mentioned above. But as long as he deals as an individual and as long as he fails to adopt standard grading and packing regulations there seems to be little prospect of being assured of fair prices—except in times of great activity. As long as farmers have no say-so beyond the line fences of their farms they cannot hope for better returns. They have been told repeatedly that the cost of production has not and never can have any influence upon market prices; that the law of supply and demand is a despotic edict which none can abridge or annul. Granting that this is the merest fol-de-rol, if has the force of a fact until farmers form efficient selling organizations, standardize their products and supply the market only as fast as it can absorb them. No scheme man can devise can prevent a slump in prices in a time of glut or over-supply.

Assuming that the pre-election promises and pledges will be carried out by the incoming administration, it must be realized that all that legislation can do is to legalize action and provide the opportunity. The real work of placing agriculture upon a stable and prosperous basis rests with farmers themselves, and to do this requires the knowledge and application of good business principles both in production and marketing.

Our Washington Letter

The addresses and discussions at the second annual meeting of the American Farm Bureau Federation which convenes in Indianapolis, December 6-9, will be devoted largely to two subjects—economics and legislation.

It will be the purpose of the Federation to determine by this large assembly of representative farmers from thirty-seven states, the attitude organized agriculture will assume toward pending and proposed national legislation and government policies affecting agriculture and industry. Among the more important matters that will be discussed, according to the Washington representatives, are the proposed repeal of the excess profits tax and new sales taxes; additional laws to make bank credits more readily available to the farmer; rail, waterway and highway transportation problems and the measures suggested for their relief; foreign trade programs, collective bargaining, a protective tariff on certain agricultural products, and the extension of further credits to European governments to enable them to purchase American farm products in larger quantities. These questions will be discussed in conjunction with the plan of the American Farm Bureau Federation for the formation of a national policy for agriculture. Governor W. P. G. Harding of the Federal Reserve Board, and former Congressman A. L. Lever, author of the Lever Food Control act, will speak at this meeting and will discuss certain new plans in which they have been interested for more efficient commodity financing.

The Farm Bureau Federation Washington representatives are referring to the report of the present condition of the railroads, just issued, as bearing out their claims made last summer, that the inability of the roads to move farm products and other commodties as promptly as needed was only fifty per cent due to the shortage of cars the other fifty per cent being due to inefficiency of the labor and management. The figures show that the railroads carried more freight in the last few months than ever before, with practically no increase in number of cars, and fewer men employed, the Pennsylvania system alone reducing its force to the extent of 10,000 men. The desire of the management to make good under the present system of ownership and operation, and the discharge of many employes is realized as

factors in spurring up both the mangers and men to greater erfficiency.

* * *

The talk of price fixing and farmer' strikes unless the producers get what they ask for, indulged in by certain radical speakers at the farmers' conferences, is not taken seriously by farmers, the real farm folks, who come to Washington. They say the idea that the prices of farm products can be held up to war-time levels by resolutions, threats and propaganda in times of falling prices and credit deflation is absurd. All are favorable to any practical plan whereby crops can be marketed thruout the year in an orderly way; but they see no good results to be gained ,and real harm, in the wild, unguarded talk of irresponsible persons who assume to represent the farmers and speak for them. Dr. T. C. Atkeson's assertion that "incorrect diagnosis and uneconomic remedies always do more harm than good," seems to meet the approval of many producing farmers, and they are ready to agree with him, that "what we should do is to get at fundamentals, with a more thorough knowledge of conditions and of past experience, and then seek to prevent, if humanely possible, the long period of depression, which post Civil War experience and history indicates is to be feared." There is a strong feeling of confidence among farmers that the efforts of the American Farm Bureau Federation in working out a co-operative system of what handling will result in more efficient marketing methods and better prices for all staple farm crops. They realize, however, that this system cannot be developed in a week or a month, and will ask Congress to do its utmost to relieve the present deplorable situation.

* * *

Senator Cummins is also quoted as being strongly in favor of the French-Capper truth in fabric bill, and will use his influence toward having Congress enact this bill during the short session. It is evident that the fabrics branding bill will have a much larger following in Congress than was in sight last spring, and a much larger public sentiment in its favor.

* * *

When the farmer and the city consumer compare notes it is difficult for them to understand why there is such a wide spread between the farm price and the city retail price of farm products, and it is suggested that this is a matter which might well engage the attention of the farm organizations. For months the papers have been filled with reports of falling farm prices. Nearly all the farm products except eggs have slumped to low records. Live stock prices have ranged much lower than during the war period, nevertheless the retail prices of meats are little if any below war prices. The Federal Department of Labor announces a decline of only three per cent in food prices during the month ending October 15, while the fall in prices in New York City and several other large cities was only one per cent as compared with the high figures of the month previous.

HARRISBURG LETTER

Extending Vocational Work.—Vocational education having a practical and well thought out agricultural training end to it has been established in thirteen counties of the state and steps are under way for opening of such courses in a couple of more, according to the officers in charge of the vocaitonal training plans of the Department of Public Instruction. A year ago there were organizations in eight or nine counties and by this time next year it is hoped to greatly extend the work. In all, fifty-two schools have been opened and Dr. L. H. Dennis, who is director of the bureau, expects to see more. In a number of instances where consolidation has been worked out, provision has been made for new high schools with vocational courses.

Discussing State Business.—This is state business week at the Capitol and the addresses being delivered by the governors of the various states, gathered here for the conference, are mainly on handling state business. The theme of Governor William C. Sproul is entirely on the business side of a state government. It is expected the tenor of the Governor's biennial message to the Legislature which will be read when the two houses organize in January, will be toward greater business efficiency in the departments and that some bills for reorganizations of various branches will be presented.

Rehabilitation for Farm Worker.—Under an official opinion rendered to the new Bureau of Rehabilitation by the Attorney General's Department a girl who lost a leg while working for her father in a hayfield, a mower having struck her, is adjudged to be entitled to state aid for an artificial limb. While on the surface this may not mean much, it is in fact the liberalizing of the rehabilitation act so that people hurt while working on the farm may get the same benefits as those hurt in mills or mines. The Bureau has helped a couple of men who were hurt in corn shredders or in doing other work on the farm to learn new trades and one man who was injured two years ago is now a telegrapher and doing very well, although unfitted for work in agriculture.

Twenty Farmers.—The next Legislature will contain a score of men either engaged in or interested in farming. The House will have sixteen men whose business is farming and while of the Senators gives his calling as that of a farmer, three of them own farms and are interested in agricultural affairs. The representation of farmers in the House is larger than usual and there are also some men who are interested in that line. One man active in State Grange work is to be a member. The Legislature will contain the usual number of lawyers, there being something like forty in the House alone.

Success with Treatment.—Bureau of Animal Industry experts have reported to Secretary Fred Rasmussen some excellent results in regard to the control of abortion in cattle, annual cause of serious loss to Pennsylvania cattle owners. The results are being carefully studied and it is hoped to make some announcements regarding treatments and also with experiments in regard to sterility which will be valuable.

More Associations Being Chartered.—It is probable that within the next six months fully 200 co-operative associations will be operating among the farmers of Pennsylvania as applications for charters are being filed every week at the State Capitol. There are now over 150 such organizations and the conditions prevailing this year have enabled the men interested in the organizations to demonstrate what they are good for.

To Speak Four Times.—The program of the national organization of officials of departments of agriculture contains the name of Secretary Fred Rasmussen for four addresses. The secretary is also chairman of the executive committee. — Hamilton, Harrisburg, Nov. 29.

NEW YORK LETTER

Educational Matters.—Dr. John H. Finley has resigned as state commissioner of education to do editorial work. Much interest centers on the choice, by the regents, of his successor. The post is very important to the educational interests of the state, which are in special need of radical work just now. Mrs. Florence Knapp, of Syracuse, is one of the possible candidates for the new office of Secretary of Education, at Washington.

Fuel Situation.—There has been no change in the acute coal shortage as yet, tho coal is hoped for soon. Dealers are out of fuel wood and the farmers have been appealed to, to cut wood. Some farmers are getting $8 a cord, though retail prices are $12 or more. In some sections where wood is plentiful power saws will be bought and run by tractors this winter, to alleviate the fuel shortage, and to improve wood lots. One great hindrance to the work is the matter of labor shortage.

High School Course Suggested.—At the State Teachers' Association meeting in Rochester this week 6,000 teachers heard Governor Harding, of Iowa, declare that no state should allow its boys and girls to start life with anything less than a high school education. He advised the study of live, up-to-the-minute problems in school instead of the dry material of recent times.

Bureau of Land Sentiment.—This department of the state division of agriculture is interviewing 600 to 700 immigrants daily and are finding but a comparatively small per cent fitted to do farm work. The department sold 800 farms to western men this year for an average price of $5000 per farm.

Grange Exchange Develops.—The new G. L. G. Exchange is being studied by the State College officials and students in farm managements and economics. The exchange is used by the college because it is considered the best co-operative farmers' organiaztion in the east, in its form and functions. Its co-operation with farmers' organizations of the west makes it doubly valuable. At a recent conference of Exchange and railroad officials the railroad officials promised freight co-operation in developing the county warehouses to be established thruout the state.

Beef Cattle Demand.—In 1873 this state had a thriving business in beef cattle. That year 109 Shorthorns sold at an average price of $3504 each, one selling for over $40,000. The opening up of the west caused a decline, in favor of dairy cows. Now the high cost of feeds, the scarcity of labor, and the unsettled milk market are bringing beef breeds into keen demand again. Purebred animals for breeding purposes are in demand, the dual purpose breeds standing first choice. New York pastures with their shade and plentiful water supply offer ideal grazing advantages and are not considered far from the centers of consumption.

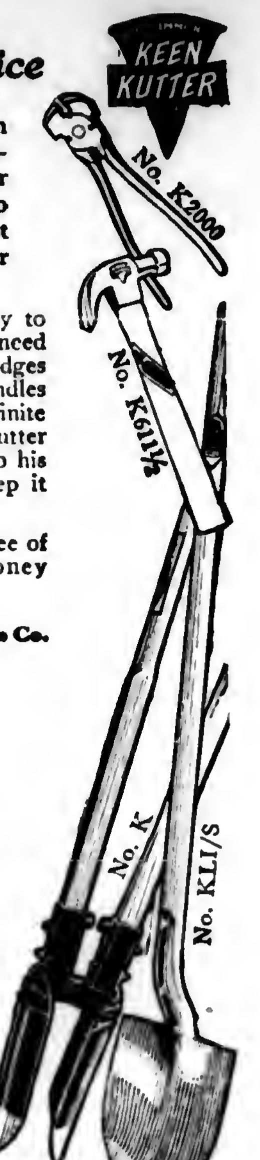
Breeders Meet.—Important plans for promoting the livestock industry of the state will be adopted at the annual meeting of the New York State Livestock Breeders' Association to be held in Syracuse Dec. 15-16-17.

Teasel Growing.—Besides its flag industry Onondago county has another odd industry, that of teasel growing. The teasel growers, whose product is used in the manufacture of woolen cloth, or rather in its finishing, will organize for better handling of their products.

NEW JERSEY NEWS

Chicken Prices High.—The retail price of chickens for Thanksgiving feasts in some parts of New Jersey was 55 cents per pound, with the exception of Paterson, where fresh-killed spring chickens sold for 53 cents and at Beverly and Bridgeton at 46 and 48 cents, respectively. Cranberries are retailing at 15 cents per quart at points in the state, while at Beverly, they are selling at 14 cents as the lowest price. In Ridgewood, Bergen County, a most northern part of Jersey, they are selling for 20 cents. Honey is now being sold by retail merchants in general thruout the state from producer to consumer at 50 cents per pound for extracted honey. The extracted honey has been selling in Trenton at 34 cents per eight ounces.

May Ship Deer.—State Game Protector J. M. Stratton has informed William B. Boulton, a member of the New Jersey Fish and Game Commission, that deer can be shipped into this state from other states under the law. Stratton said that he referred Boulton to the statute, which provides that the sections respecting the season and possession of deer shall not apply to deer killed on game preserves, the owners or lessees of which are licensed by the State Fish and Game Commission, or to deer coming from any other state, properly tagged and showing where the game was killed. He also called attention to that part of a fish and game law which provides that "whenever by the laws of any other state or county, it shall be lawful to take out of the confines of the said state or county, any game, whether the same be fowl or animal, it shall be lawful to bring such game within the State of New Jersey; provided, however, that nothing herein contained shall permit the sale or exposure for sale of any such game."—Kelly, Trenton, Nov. 29.



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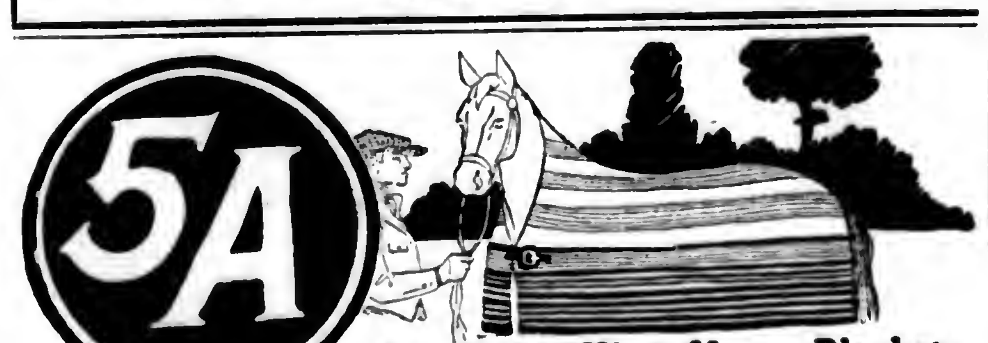

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DAIRY

MILK POOLING MOVEMENT GAINING MOMENTUM

In spite of determined efforts on the part of milk dealers and middlemens' interests to break up the pooling plan for milk produced by Dairymen's League members, this plan is developing rapidly. With approximately 25,000 signed contracts already in the hands of the Dairymen's League Co-operative Association by the middle of November, with many of the 1100 branches of the league to be heard from and systematic individual work just being launched for the first time in many sections, it looks as if the required 50,000 contracts will be received in time to make the plan effective before the first of the year.

League officials had originally hoped to put the pooling plan across in six weeks' time but several factors have slowed up the work. In the first place the league sold its milk for October and for November, and with provision made for current months dairymen have felt at liberty to give more time to a study of the contract offered. Then, too, the demands of fall work have made necessary a letup in the canvassing of members to acquaint them with the purpose of the plan. A third cause has been the flood of circulars and paid advertising put out by trade interests, which has slowed up the work in districts where league branches are less active. Resentment against the methods employed by the dealers, however, has nullified the effect of much of this propaganda.

In spite of the dealers' refusal to take nearly 25 per cent of the milk produced in league territory, and their threat on November 1, to close up many of the fluid-milk receiving stations, the dairymen have succeeded in disposing of a large part of their supply. There has naturally been a high loss in some of the highly specialized manufacturing sections, but much of the milk has been sold at league price of $3.65 a 100 pounds for 3 per cent milk in the 200 to 210-mile zone from New York city, this price effective until December 1. While this price is considered below the cost of production, and not in accord with the usual advance in price as cold weather comes along, easier feed prices and indications of better labor conditions make the situation a little brighter.

Local conditions have governed in meeting the new situation in the different sections. Some groups of producers in the butter and cheese territory immediately made plans to take over local plants. Others rented buildings and purchased equipment to meet the situation; while still others skimmed their milk and sold only cream. The 14 co-operative plants of the league have been taxed to capacity.

In the fluid milk territory the situation is much beter and more milk than ever, for this time of year, has been turned thru these channels due to the shipping in of cows from the manufacturing territory.

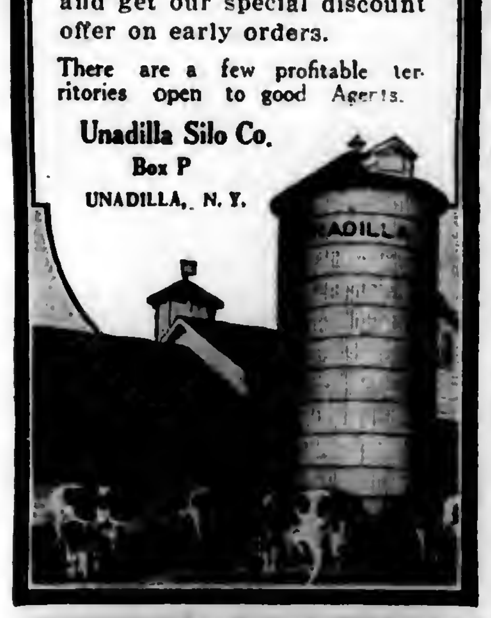
Some criticism has been directed toward the pooling plan on account of the severity of the contract offered. The contract is iron-clad; no doubt about it, but the 25,000 who have already signed, and the thousands of others who have endorsed it individually or thru their organizations see in its severity the element necessary to success.

With all its unfavorable aspects the situation brought about by events of this fall may bring much good to the industry by putting production on a more sound basis. It is believed that production has been too great for market demand with the resulting failure to secure a price sufficient to cover cost of production. Already the "boarder cows" are being weeded out as never before, and emphasis is being placed on the elimination of tubercular cattle. Such steps, desirable years ago, are imperative now, and will result in productive herds which will pay for their keep and furnish markets with a supply of milk more in accord with the demand.—H. T. B., New York.

A Prize Brown Swiss on Kalmailon Farms, New Jersey

"BULL RECEPTION" A SUCCESS

On Friday, Nov. 5th, on the farm of W. F. Bohlayer Canton, Bradford Co., Pa., there was staged what is believed to be the first official "bull reception" ever held in the United States. This aristocratic social feat was arranged by the eighteen members of the Troy-Canton Co-operative Holstein Bull Association. For this event breeders of pure bred cattle thruout Bradford county and neighboring territory were invited to extend greetings to the four newly purchased pure bred Holstein bulls recently secured by the above mentioned Bull Association from Pinery Farms, Mentor, Ohio.



The Unadilla Majority
UNADILLA Silos win favor every year with a majority of dairymen and stockmen. More than twice as many Unadillas are chosen each year in the east than are those of its nearest rival.
There must be good reasons for this. There are The big Unadilla catalog gives them all.
Write for a copy today and get our special discount offer on early orders.
There are a few profitable territories open to good Agents.
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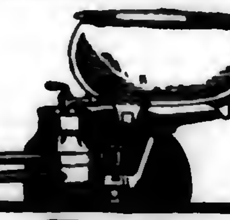
Dont Send 1 Penny
$1.98
Just send your name and address, size and color and I will send this sweater to you. You don't pay one penny until it is delivered to your door by the postman.
Army Navy
For Men or Women
This is a real heavy winter sweater, made of heavy mixed marino yarn. Slip-over style, with V neck and full length sleeves. Just like picture. Will give excellent wear. Sizes to fit Ladies or Men 34 to 46. Colors, khaki or navy blue.
$4.50 Reduced to $1.98
No one has ever reduced price to this extent. It is the biggest money-saving bargain ever offered. We will sell only two to a customer and will not sell to merchants or wholesalers.
Delivery Free Just send your name and address, no money. When the sweater is delivered at your door by the postman, pay him $1.98 for the sweater. We have paid the delivery charges. Wear it. If you don't find it all you expect, return it and we will cheerfully refund your money at once. Order by No. 72.
Walter Field Co. Dept. Z 1859 318 S. Michigan Ave., Chicago



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the World's Standard
more than 2,500,000 in use
THE DE LAVAL SEPARATOR CO.
New York · Chicago · San Francisco

Cleaner Milk, Less Work!
Clip the cow's flanks and udder every month during fall and winter. Makes cleaning an easy job, and no caked manure or other filth contaminates the milk. Urged by dairymen everywhere. Impossible to produce milk with low bacteria count without it. Takes only a few minutes with the Stewart No. 1 Machine—easy running, lasts long. Clips horses and mules also. Only $14 at your dealer's, or send $2 and pay balance on arrival.
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Send for Catalog
FARM WAGONS
High or low wheels—steel or wood—wide or narrow tires. Wagon parts of all kinds. Wheels to fit any running gear. Catalog illustrated in colors free.
Electric Wheel Co., 60 Elm St., Quincy, Ill.

The main feature of the "reception" was a friendly greeting by each of the visitors to the new bovine aristocrats after which H. C. Gates, president of the association, gave a detailed description by charts of the remarkable line breeding shown in the pedigrees of these valuable young sires. Following Mr. Gates' remarks, Mr. R. R. Welch, in charge of Dairy Husbandry Extension of State College, gave a very excellent talk in dairy cattle improvement thruout the state. In his remarks he pointed out very distinct advantages of co-operative bull association work.

A "mock sale" was then held with County Agent D. K. Sloan as auctioneer. Terms of the sale were that the visitors were requested to bid what they would be willing to pay for these bulls on the market. The result of the "mock sale" showed a nice profit from the actual cost of the bulls, a fact which was particularly appreciated by the owners. All thru the proceedings sweet cider and pretzels were freely consumed.

The four bulls now owned by this association were purchased in March with the understanding that the bulls were to be retained by the breeders until there were six months of age, when they were to be tested for tuberculosis and snipped with the privilege of a 60-day retest. All are sired by the Noted King Hollingen Fayne Valdessa who is by the well-known sire, King Valdessa, and out of the world's record three-year-old cow, Finderne Hollingen Fayne. These bulls have been named using the prefix "Bradco" Hollingen.

No. 1 Bradco Hollingen Maplecrest is from the three-year-old heifer Maplecrest De Kol Flora. She made as a two-year-old in 365 days 525 pounds of butter with a little over 10,000 pounds of milk. On her second yearly test in six months she has made 423 pounds of butter. Her dam has a yearly record of 1232 lbs. butter and her granddam on her dam's side has a yearly record of 1248 pounds of butter.

No. 2 Bradco Hollingen Pontiac is from the cow K. P. B. A. McKinley Queen who as a four-year-old made 1080 pounds of butter. Her dam, Novelty McKinley Hengerveld at 3½ years made 1049.53 pounds of butter.

No. 3 Bradco Hollingen Banostine is from the two-year-old heifer Banostine Bell De Kol 2d, who with her first calf has made in six months 404 pounds of butter, now on yearly test. She also made 21.35 pounds of butter in 7 days. Her dam, Banostine Bell DeKol, has a yearly record of 1322 pounds of butter.

No. 4 Bradco Hollingen Korndyke is from the two-year-old heifer Model Poniatc Cornucopia, who as a two-year-old in 7 days made 21.08 pounds of butter and in four months has made 335 pounds of butter. Her dam K. P. Cornucopia has a six-year-old record of 1050 pounds of butter.

These four bulls without question, represent the best combination of Holstein blood that has ever been brought into Bradford County where there are over 150 active breeders of pure bred Holsteins. The interesting feature of this association is that every member has had at least one test according to the Accredited Herd plan for the control of tuberculosis. All money due the association has been paid and a surplus for operation is in the treasury.

The four bulls, after being kept in quarantien for 60 days will be distributed to their respective blocks where they will be used in accordance with the by-laws by the members in proportion to their interest in the organization.—D. K. S.

A year's record of this BROWN SWISS: 16,538 lbs. milk, 646 lbs. butter fat. A good example of carefully safeguarded health.

Dairy Profits Depend On—What?

GOOD feeding and good breeding, partly, of course. These are routine considerations every dairyman knows. But, after all, the health consideration is the real fundamental.

As a milk-making machine, the dairy cow's production must depend on her bodily health—entirely. Actual or approaching disease can soon wipe out a cow's profit balance.

Because the hard-worked organs of production and reproduction are a natural prey of disease, the medicinal properties of Kow-Kare have been designed especially to tone up and strengthen these organs. Such cow ailments as Barrenness, Abortion, Retained Afterbirth, Scouring, Lost Appetite, Bunches can be prevented or successfully treated by cow owners with the aid of this wonderful medicine.

A trial will cost little; results will be conclusive. Sold by feed dealers, general stores and druggists, 70c and $1.40 packages. Write for free book "The Home Cow Doctor."

DAIRY ASSOCIATION COMPANY
Lyndonville, Vermont

NOTE: The trade-mark name has been changed from KOW-KURE to KOW-KARE—a name more expressive of both the PREVENTIVE and CURATIVE qualities of the remedy. There is not the slightest change in formula or manufacture.

Saves Half of My Meat Bills

NATIONAL GIANT PORTABLE SMOKE HOUSE
This is the same Smoke House used by Governor Cox of Ohio; by big breeders and farmers all over the country. In use on Agricultural Experiment Farms; pictured in a leading article by Country Gentleman, and recommended by Farm Paper Publishers all over the land.
NOTICE—Get the Original National Giant Portable Smoke House. Beware of Imitations or Experiments.
Sectional View of the Original National Giant Smoke House. Beware of Imitations or Experiments.
A 7-Years' Success
Now in Use on Thousands of Farms in U. S. and Canada
Thousands of farmers in the U. S. and foreign countries will tell you that the National Giant Smoke House saves half their meat bills—gives them better, sweeter meat, fish for their own table. The wonderful National Giant Smoke House is portable; can be operated indoors or outdoors. Made in 3 sizes. Runs on sawdust and cobs and a little bark for seasoning. After smoking meats, use for store house. Fly and bug proof. Keeps meat without sacking. Worth its price many times over for this storage feature alone.
Send for FREE Book Contains valuable prize-winning recipes for curing and smoking Hams, Bacon, Sausages and Fish at home. Gives full description of the original National Giant Smoke House. Quotes prices and gives other details. Write for it today.
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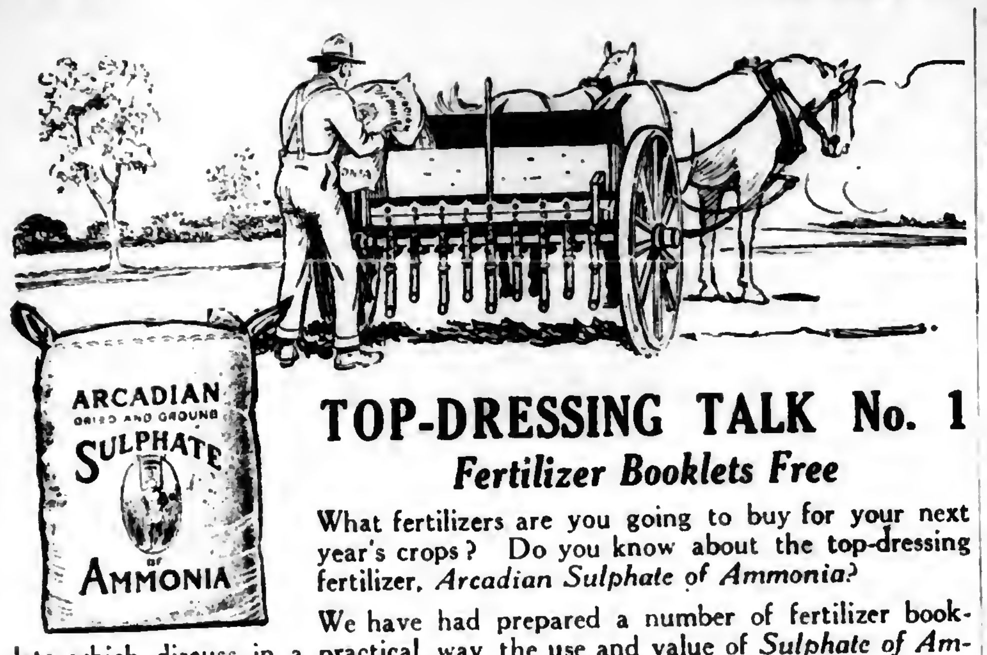

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Fertilizer Booklets Free

What fertilizers are you going to buy for your next year's crops? Do you know about the top-dressing fertilizer, *Arcadian Sulphate of Ammonia*?

We have had prepared a number of fertilizer booklets which discuss in a practical way the use and value of *Sulphate of Ammonia* as a supplement to the mixed fertilizer.

These booklets contain the opinions and suggestions of practical growers who are using *Sulphate of Ammonia*, as well as of scientific investigators who have tested this fertilizer in comparison with other forms of nitrogen.

These booklets will be sent free upon request. Order by number. Address Desk 41. The Barrett Company, Agriculture Department.

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5—"Intensive Market Gardening"
6—"Sulphate of Ammonia By Those Who Know"
27—"How to Increase the Yield of Timothy"
71—"Fertilizer Note Book"
81—"Arcadian Sulphate of Ammonia—Directions for Use"
85—"Fertilizing the Apple Orchard"
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88—"Successful Potato Growing"
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Sulphate of Ammonia is the well-known standard article that has done you good service in your mixed fertilizers for years past.

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HORTICULTURE

MORE ABOUT THE APPLE MARKET

By J. P. Stewart

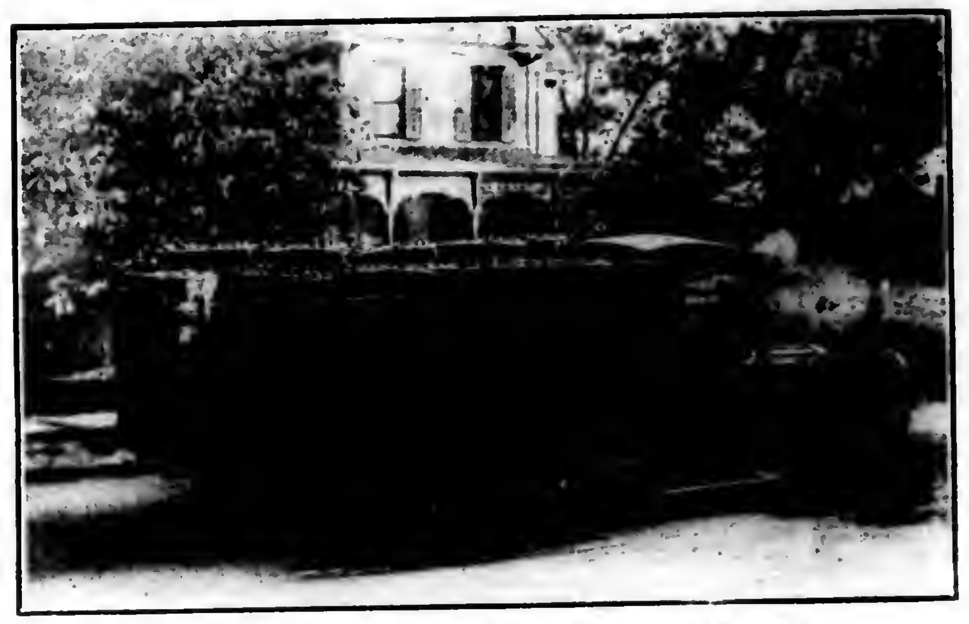
Some people recently have been credulous enough to write us for information concerning the apple market, and to ask advice as to whether it was better to sell now at the extremely modest offers they were able to get, or to put their fruit in storage and wait for improvement later. We are glad to acknowledge the compliment unwittingly bestowed upon us by these writers, but one man's guess as to the future course of the market is likely to be as good as another's, and anyhow, is there any such thing as an apple market at this time? From our observations of this matter, we are reminded of the good countryman who went to the circus and after gazing a long time at a camel, he turned to his companion and said "There ain't no such animal."

This is likely to be the conclusion of the average man who starts out to sell any considerable quantity of apples this fall, even at the ridiculously low prices at which much of the fruit is offered. We know of one case, for example, where the best offer a certain grower has been able to obtain for a few barrels of Wealthy is $2 a barrel out of storage. Since the empty barrel alone cost about a dollar and a half, and the storage of the barrel cost fifty cents, this grower is evidently out his labor, his fruit, and his freight on this particular shipment.

At the same time, there is no certainty of the present market making any considerable improvement soon, as we are told that practically every foot of space is now taken up in the apple storage rooms of the country, and from the individual grower's viewpoint, this is likely to maintain a steady flow of fruit to the retailers at least, which will prevent any sudden and permanent increase in price to the grower, at least for some time.

There are several factors, however, which would tend to develop better prices before the winter is over, among these may be mentioned the record-breaking heat under which most of the present crop of fruit was harvested and packed. This will naturally cause much of the fruit to decay before it ever reaches a consumer, which will thus cut down the available supply. The low prices now ruling have caused a large quantity of fruit to remain unpicked, and they have also stimulated consumption when these reduced prices have been permitted to reach the people. After the people get started eating apples generally again, it will not be easy to go without them very long, so that this also tends toward higher prices. The closing of the picking season and the consequent reduction in receipts of fruit at the leading market centers should also start an upward swing fairly soon. Taken all in all, therefore, our present guess would be that fruit should be materially higher in price after while, but just how soon it will come, I believe none of us can say.

In such a season as this, it pays to have a connection with a good marketing association or firm, who knows the style of pack you usually put out, and hence recommend it with confidence. Such people are about the only ones who got along with any satisfaction this year, and even among them the early sellers were the winners so far. The latter should change fairly soon, however.



Austin H. Jaggers, New Jersey, Finds Big Loads Saves Time

NEW STRAWBERRIES FOR ATLANTIC CO., NEW JERSEY

Of all the seasons that I can recal the present has been the worst wit one exception, for strawberries. A combination of droughts, late frost, etc., in 1919 and 1920 held back m strawberry plants from making runners, froze the blossoms and bake the fruit. I did, however, see enoug of certain varieties this year to convince me that there are very valuable varieties not yet universall known. One of these is Abington. I seems like a staminate sample, onl the berries are larger and better, anything.

Collossus is another variety th appears to be worthy of trial by tho who like Bubach but who cannot co that variety to make plants f enough. Thus far I could scarce tell the difference between these t varieties, except that Collosus is fine plant maker. The most promising variety that is strictly new Atlantic County is Heritage. This a staminate variety and ripens la to very late, some berries lasting the latter part of July. The berrie when grown under favorable conditions are apparently very larg though not smooth as Abingto Judging from appearance this ye the plants are extremely large and of that type that usually appears to yield only a very moderate crop, but when the big berries are picked and the season's final account summed up, the Heritage will, I think, hold its place among the best. Still another variety that is highly spoken of is Miss Boston. All the plants of Miss Boston that I have seen thus far are no other than Minute Man.

Taking into account the drought of last year, the late frost and still worse drought of this year, I think Dunlap produced the best crop of all. On another farm I saw the Big Joe. In fact this was the best of all fields that I saw during the season. I found that a heavy coat of mulch in the form of marsh rick kept my berries bright and fresh, even when the thermometer was daily climbing to 100 degrees in the shade.

All of my plants this year were on good strong corn land, fairly moist and never before planted to strawberries. The fertilizer used was hen manure, plowed in before the plants were set. Then, as the plants were set, a fertilizer analyzing 6-10-3 was put in the rows.

This produced a fair crop of plants though the drought in 1919 prevented my setting them until May 24th. Setting the plants in furrows, the old-fashioned way helped in hastening the plants to earlier running, since they began at once to feed on the fertilizer that was made up of nitrate of soda, bonemeal and sulphate of potash.—Chas. A. Umoselle, Atlantic Co., N. J.

MATURE VEGETABLES BEST FOR STORAGE

The home gardener who did his full duty this summer now has a supply of vegetables for storing. To insure successful storage, certain principles should be kept in mind.

Vegetables should be mature, but not too old. They should be handled "like eggs," since even slight bruising may start decay. Squash, pumpkins, and similar crops should be harvested before frost, and even the more hardy root crops should not be exposed to real freezing weather before they are stored. The only exceptions are parsnips and salsify which are often left in the ground all winter.

All vegetables keep best with a fairly constant storage temperature. Root crops, celery and potatoes need rather moist air and low temperatures; onions will endure any temperature above freezing but must be kept dry. Squashes and pumpkins should be thoroughly dried out at a high temperature and then stored in a dry place not too cool, preferably above 45 degrees.

Cellar Storage Good

A cool cellar is a very satisfactory storage place for potatoes and most root crops. The only objection to storing celery and turnips there is that odors may become noticeable in the rooms above. Cabbage also not only gives off unpleasant odors, but suffers from the excessive moisture in the air of most cellars.

If the cellar contain a furnace and is therefore too hot, a storage room may be partitioned off with rough lumber and building paper. The temperature should be kept as low as is consistent with safety from freezing and plenty of ventilation should be given.

Use your scales, there may be something wrong with those your butcher uses, and if there is he'll be glad to know it.

Skunk, Mink, Muskrats
and all other kinds of Raw Furs wanted. Write for price-list and shipping tags. Twenty-three years in business.
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for sets, coats, robes, caps, rugs etc. Have your furs tanned and made into attractive garments for mother, wife, sister or sweetheart. Besides having better furs, you save 30 to 50 per cent. and get and give greater personal satisfaction and pride because the garments were made from furs you trap.
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is 100% efficient in cleaning up the scale and it is a most excellent winter fungicide. It spreads well; is adhesive and does not wash off with winter rains; is in powder form; concentrated; easy to handle; dissolves quickly in cold water. Note the saving in advanced freight rates—a 100 pound keg of B T S is the equivalent in all spraying operations of a 600 pound barrel of lime sulphur solution.
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Send name and address and get on mailing list to receive it regularly. Gives seasonable spraying help. Our experts will answer you personally about any spraying problem. You are invited to write the Company direct. Address
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Always look for our trade mark (as shown below) on the bag. It means protection to you. Hundreds of farmers in the East have come to recognize it as the mark of honest, square fertilizer goods and methods.
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WEAR Snag-Proof Arctics over your leather shoes. You know how quickly snow and slush ruin leather shoes. And you know what leather costs. Snag-Proof Arctics are economical. They keep your feet warm, dry and comfortable. You can slip them on or take them off in a jiffy. You'll get seasons of satisfying service out of every pair.
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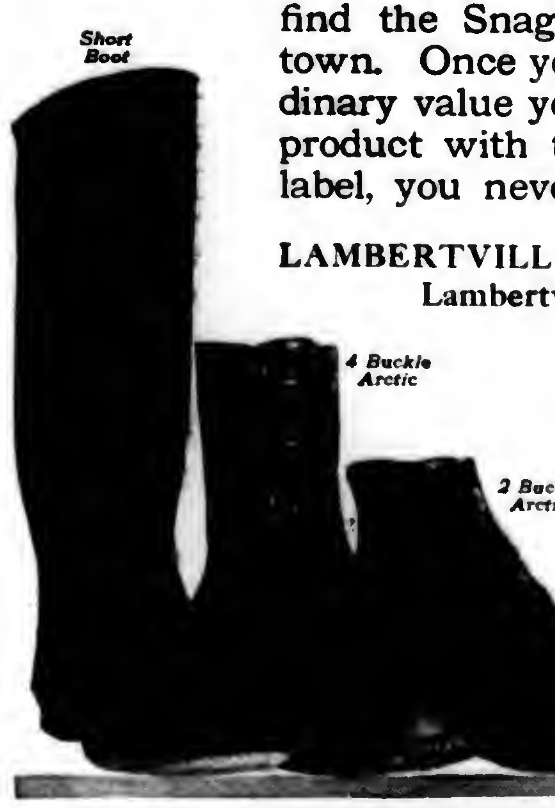

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STEAM CURED IN VACUUM
LOOK FOR THE GREEN LABEL

$4,000 from 4 acres of apricots
$7,500 from 20 acres of peaches
$25,000 from 35 acres of grapes
(Cut these figures in two, to be safe, and returns still are large)

San Joaquin Valley
California

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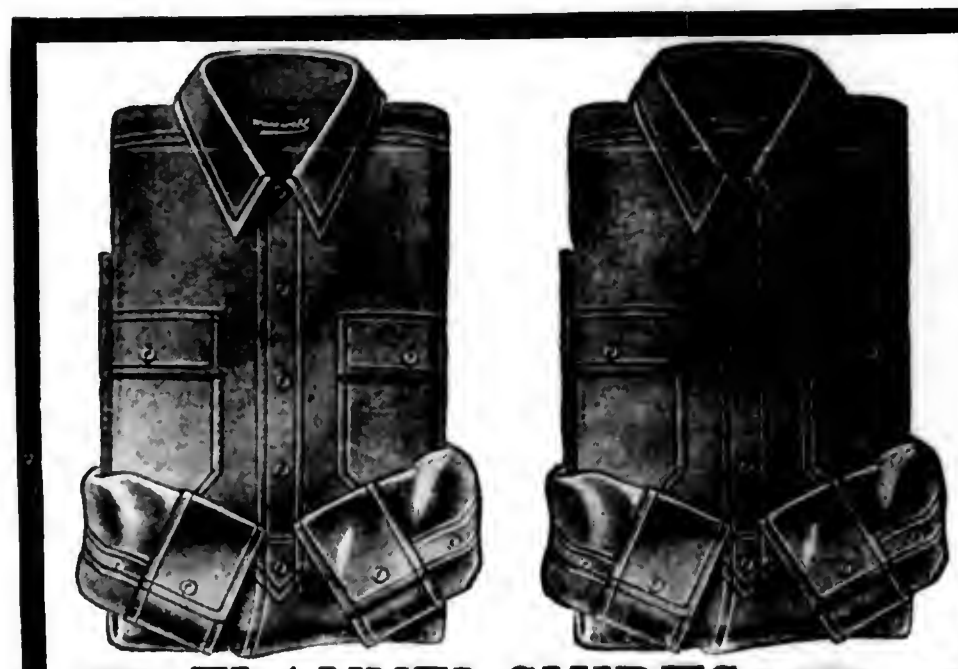

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POULTRY

FEEDING FOR BEST RESULTS

When eggs are high, people are more interested in their poultry. Some have an idea that a person can make "a hen lay" by proper feeding, but they are wrong. The feeding proposition is but one long link in the chain of successful egg production.

The principles of feeding hens are simple when reasoned out. All that is really necessary is clean wholesome and healthy food which poultry relish, same as other farm stock. They must be given food such as will keep them warm and thrifty, and enable them to produce eggs. In feeding any ration, the purpose for which it is fed, may influence it. In feeding a hen, so as to promote egg production, she must be kept in good flesh, possibly with a little surplus of fat, hence the necessity of proper mixture of ingredients. Unequal parts naturally make a one-sided or unbalanced ration, and is as injurious for a hen as for a cow. Corn is plentiful on the average farm and most farmers have always fed liberally, of this feed and probably always will, but the one objection to this feed is, that it alone cannot produce a good egg yield. The principal reason being that it possesses little but yolk and fat forming material, therefore too much corn produces too much fat and no eggs.

Middlings and bran will help in balancing the corn feed which also assists in making the white of an egg, also flesh and feathers. Experiments have proven that beef scrap, or skimmilk added to the ordinary grain and dry mash ration is necessary. Milk has the advantage over meat scraps in that it seems more healthy. Hens fed on skimmilk appear in better condition, have smoother and brighter plumage and will lay more eggs during late fall and winter just when they command the highest prices.

A hen will drink about 100 pounds of milk in a year. Grain should be fed sparingly in the morning in order to produce a hunger for the bran and middlings. Feeding corn liberally every day and depending on that for the entire ration, has a strong tendency to produce idleness, while the active hen is nearly always the most profitable.

No definite methods of feeding can be given, but invariably a dry or wet mash and milk or beef scraps in addition to the grain feed will give better results.

During cold weather when more body heat is required a good percentage of corn should be fed, and in the spring and summer when bugs and worms are plentiful, the percentage of meat scraps should be reduced. During cool weather and in the fall when new feathers are to be grown a little oil meal is helpful, as hens running over the fields gather much of their food and generally balance their rations pretty well. When confined more feed and more corn is required.—V. M. Couch, Ithaca, N. Y.

Birds as friends of agriculture are entitled to consideration from the farmers. When the snows come the birds find it difficult to make a living. Crumbs and suet placed outdoors may save bird lives.

N. J. POULTRYMEN TO HOLD STATE SHOW AT TRENTON

During the week of November 29th to December 4th the roosters will be crowing, the hens will be cackling and the poultrymen from all over Jersey and adjoining states will be congregating at the First Regiment Armory at Trenton for the annual State Poultry Show. This is one of the biggest poultry shows in the East and a show at which everybody gets together and boosts for New Jersey and her $30,000,000 poultry industry. This will be a gala week with something doing every minute. Every chicken raiser, large or small, should be there.

The poultry show will open Nov. 30th, all birds should be in their cages on the 29th. The judging will be done on Tuesday and, by the way, the judges' list includes the best qualified and most prominent breeders and judges in the United States. They will surely give you a square deal in placing the awards. The show will continue the entire week, ending late Saturday evening.

In addition to the poultry display there will be one of the largest pigeon exhibits ever held in New Jersey; some say 1500 or more pigeons will be on display.

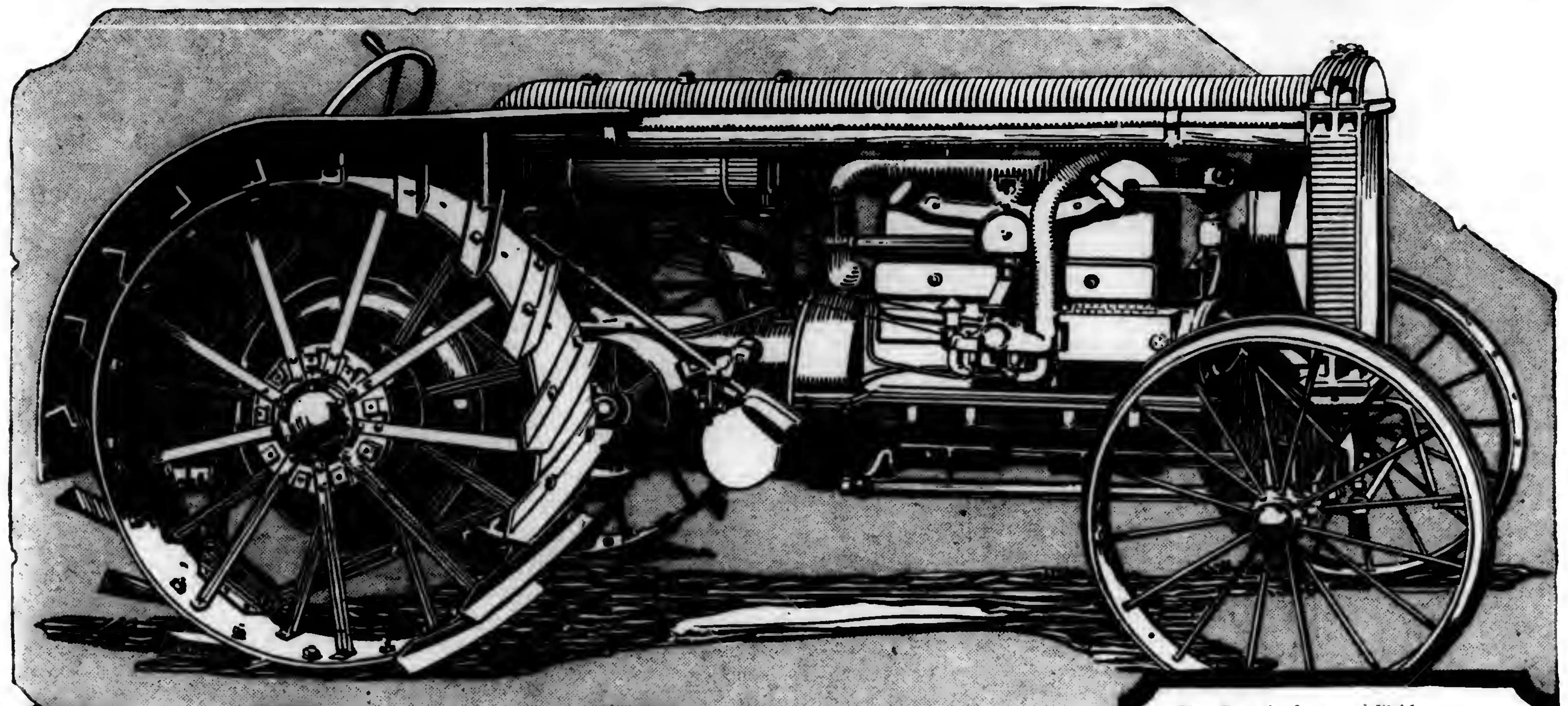
THIS RATION MAKES WINTER EGGS

The following ration for winter egg production recommended by the University of Missouri College of Agriculture, satisfies the needs of the hens and is economical and practical for most poultry sections. During the past year it has been fed on a number of Missouri farms with good results.

Daily Rations for Hens.—Scratch grain, 10 lbs. shelled corn; 5 lbs. dry threshed oats.

Dry Mash.—3 lbs. wheat bran, 3 lbs. wheat shorts; 1½ lbs. commercial meat scrap.

Where milk is plentiful three gallons of skimmed milk or buttermilk furnished each one hundred hens daily will take the place of meat scrap. Either milk or some form of lean meat must be supplied in every ration for successful winter egg production. Commercial meat scrap can be obtained from most feed dealers in one-hundred pound sacks. One sack will supply protein needed by one hundred hens for more than two months. Kaffir or feterita may be substituted for the corn. Barley or feed wheat may be used instead of oats. Corn meal or ground oats may be substituted for shorts in the mash. Alfalfa meal or clover leaves may take the place of the bran. A good grade of tankage may be used instead of the meat scrap. In feeding this ration all grain should be fed in deep straw to compel the birds to exercise. The mash should be fed in self-feeding hoppers or troughs and a supply kept before the birds. In addition to this ration, hens should have an abundance of water, a supply of green food and free access to sharp grit and crushed oyster shell or soft limestone grit. With early hatched pullets, housed comfortably and fed this ration, winter eggs are assured.



Allis-Chalmers 18-30
3-4 Plow—3000 lbs. Constant Draw Bar Pull

The Brute Power of 15 Horses

Flow Deep for Increased Yields

Shallow plowing merely "skims" the surface, leaving a hard pan which moisture cannot penetrate. The tender roots of the growing plant likewise have difficulty in penetrating this hard, unplowed sub-soil. Hence, the plant loses both moisture and nitrates, besides having its growth delayed. That is why your agricultural college and county agent advise you to plow deep into sub-soil and break up this hard pan to secure healthy plants and early harvests.

By all means get a tractor with power enough to plow **deep (deep into sub-soil) without strain**. It will earn the slight increase in cost mighty quick through vastly increased crop yields. The Allis-Chalmers 18-30 is built for deep plowing.

Set your plow bottoms deep into sub-soil—and plow at a speed close to three miles an hour—with this brute power of fifteen heavy draft horses concentrated on the draw bar! Turn deep, even furrows—for a better seed bed—with the Allis-Chalmers 18-30! Here *is* power which conquers the hardest going in stiffest sod or packed soil. And put this tractor at such work for years—with no uncertainty of performance or let-up in pace.

Stands the Gaff of the Hardest Service

The Allis-Chalmers 18-30 upholds the world-wide reputation for highest quality construction, materials and workmanship for which Allis-Chalmers has been recognized for 65 years. The toughest iron and steel are used throughout.

Frameless construction and three-point suspension have provided a flexibility that relieves the Allis-Chalmers 18-30 of all strains in roughest going. Bearings are thoroughly lubricated by a pressure feed system perfected at a cost of $75,000. Air entering the carburetor is first washed—freed of every particle of dirt and dust. Oversize water-jackets and an exceptionally large fin-and-tube-type radiator enables the heavy duty, valve-in-head motor to perform heaviest work in warm weather without overheating.

Quick Accessibility to Every Part

There is no loss of time in getting to the "inside" of the Allis-Chalmers 18-30. Every working part—though protected against dust, mud or rain—is open to almost immediate inspection. As an example, by simply removing the side and sump pan plates of the motor, bearings can be reached and every piston taken out without further dis-assembly.

For Heavy Duty on the Belt

The remarkable flexibility of the 18-30 on heavy duty belt jobs is known wherever tractors are used. The special governor (Allis-Chalmers' own make) automatically regulates the engine speed according to the load. The Allis-Chalmers 18-30 operates a 28 inch separator and blower with a tremendous reserve power which overcomes all irregularity in feeding.

Write today for latest illustrated 18-30 booklet, completely describing exclusive features of Allis-Chalmers construction.

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Farmers and dealers desiring free tickets for the Sixth National Tractor Show, to be held at Columbus, Ohio, February 7th to 12th, can secure same by writing us.

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2-3 Plow

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Model B
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This is really a wonderful coat, which ordinarily sells for $10.00. Made of a heavy polo wool velour lined throughout with cotton serge. Has large collar made of Egyptian plush, two serviceable pockets and new stylish cross over belt. Sizes to fit girls 6 to 14 years old, no larger. Colors, brown, grey or blue. When ordering, be sure and give size and color.
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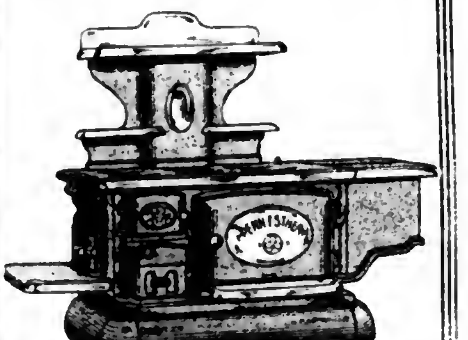

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SOME TOOTHSOME CHRISTMAS CANDIES

Now that sugar is more plentiful, and the price not quite so high, home-made candies can again be indulged in for Christmas. Making them is a great source of pleasure. It is fun for the makers and joy to the partakers. A box of homemade candies makes a very acceptable Christmas gift to those who are so situated that they have little time and no place to make them.

When boiling syrups for making candy at home, you must bear in mind that various degrees of heat produce various results, and that the trick in candy making is to remove from the stove at just the right time.

A hot steady fire is best for boiling the syrup. Always have your fire in good condition before starting to boil it. After the syrup is placed over the fire, do not move it nor jar it to fix the fire. Make the candy on clear cool days, and it will not be so sticky to handle. And make your Christmas candies before the rush. You can keep them in good condition several days by putting them in tightly covered tin cans. We use baking powder or coffee cans for this purpose.

Try these recipes:

Peanut Brittle

Put 2 cups granulated sugar in a flat aluminum or graniteware pan, and stir over the fire until the sugar is melted and assumes a golden brown color. Have ready on the back of the stove so they will be warm, 1 cup chopped peanuts and a pan greased with butter. When the sugar is all melted, quickly add the nuts, and pour at once into the warm greased pan. Mark into squares before it hardens.

This candy is delicious. It requires very careful stirring all the time that the sugar is melting. The sugar will first become lumpy, then the lumps will slowly melt. And when all are thoroly melted, the mass is done and ready for the nuts to be put in at once. One has to work quickly at this point, for the mass hardens quite rapidly. Use no water at all in this recipe.

Marshmallows

Think of the joy of being able to make your own marshmallows, and have them fresh, especially when they want so much for them in the stores nowadays.

Ingredients.—One cup sugar, 2-3 cup water, 1 level tablespoon powdered gelatin, ½ teaspoon vanilla extract.

Method.—Soak the gelatin 5 minutes in half of the water. Put the other half of the water, with the sugar, over the fire, and boil to 232 degrees, or until it spins a thread. Right here let me urge you to provide yourself with a candymaking thermometer, for it comes in very handy in jellymaking as well. Add the soaked gelatin, and stir gently until melted. Let stand to partly cool, then add the flavoring and a tiny pinch of salt. Beat until the mixture becomes white and thick, then pour one inch thick into pans that have been thoroly dusted with powdered sugar. When set, loosen the edges with a knife, and turn out into a piece of wax paper, which has been dusted with powdered sugar. Cut into little cubes, and roll these in powdered sugar. Pack in the boxes with wax paper between the layers.

Stuffed Dates

Cut each date along the thin side, and carefully remove the stone. Fill the cavity with a small portion of the above marshmallow confection, then fold the date so as to give it the appearance of being whole. Roll the dates in powdered sugar.

Cream Sugar

Boil 1 cup sugar, 1 teaspoon cream, 1 teaspon butter and ½ teaspoon vinegar with ½ cup water until it reaches 234 degrees by the candy thermometer, or lacking one, until it spins a good hair. Remove from the stove and beat until creamy, add a few drops of lemon or vanilla flavor, pour into a buttered pan, and mark off into squares.

Children Are Naturally Fond of Pets

Vanilla Caramels

Dissolve and boil without stirring 2 cups granulated sugar and 1 cup corn syrup in 1 cup hot water. When the mixture reaches 230 degree by the candy thermometer, or when it spins a light thread, stir in 1 cup cream, and boil to 240 degrees, or until a little when dropped into cold water will make a noise like breaking glass. Flavor with 1 teaspoon vanilla, and turn into a buttered pan. When cool turn out of pan and cut into little strips, using a quick-sawing motion to prevent it from sticking to the knife. Wrap each strip in wax paper.

Baby Creams

Boil 2 cups granulated sugar in ½ cup water to 260 degrees by the candy thermometer, or else until a bit when dropped into cold water will make a hard ball if rolled between the thumb and fingers. When it has reached this stage, pour at once onto buttered plate, drop over it few drops of vanilla flavor, and as it cools turn the edges toward the center. As soon as it is cool enough, pull until it is very white and creamy looking. Then cut into pieces, sift powdered sugar over them. After an hour put them in an airtight jar, and they will become very creamy and delicious.

Nut Creams

Boil 1½ cups sugar and ½ cup cream until the syrup reaches the soft ball stage (240 degrees), or until it will form a soft ball when a bit is dropped into cold water and rolled between the thumb and fingers. Take from the fire and add ½ cup broken nut meats, and stir until the mixture begins to thicken, then turn into a buttered pan. When nearly cold mark off into squares.

Chocolate Fudge

Put ⅔ cup milk, 2 cups brown sugar and 2 tablespoons butter in a pan, and boil to 240 degrees or soft ball stage, stirring all the time. Remove from the fire, and shave into it 2 ounces of chocolate, and add 1 teaspoon vanilla. Let cool a little, then beat until creamy, and pour into a pan lined with wax paper. Mark into squares before it hardens.—Mary A. Kintigh, Westmoreland Co., Pa.

CHILD TRAINING AT HOME

Discipline

Not long ago I was startled to hear a small neighbor remark to my equally small daughter, "I don't think father and mother are very good parents. Father's too severe and mother too easy."

The whole matter of discipline seems to have been put in a nut shell by this youthful judge; for as one observes parents, he discovers that they are generally of one of these types.

The severe parent is perhaps less prevalent. His severity is born either of fundamental misconceptions regarding children and their needs, of selfish desire to restrain and curb, so that his own freedom may suffer no annoyance or inconvenience; or most deplorable of all, it is the result of his own ill-temper.

Let us illustrate these types of severity. First, the child who is denied some harmless pleasure, for example.

"Mary, don't get water in that teapot! I can't have you dripping water all over the house. What? Well, pretend there's water in it—it's just as good." But it isn't, as any little girl with a teapot can tell you.

Contrast this severity which is caused by lack of imagination and sympathy on the part of the parent with the severity of the second variety, that which is selfish in its origin.

"Ellen, stop romping, and behave like a lady!" But Ellen is ten and should not be asked to be a lady. In fact no one would be more distressed than her mother, should the child suddenly arrive at that stage of maturity. It is simply that her mother is disturbed by her activity.

And lastly, consider the exhibition of infuriated parenthood, from which we turn our eyes as from unspeakable shame.

"Come here this instant, or I'll give you such a whipping you'll never forget it! Stop that yelling, do you hear? Stop that yelling!" and the admonishing voice of the irritable parent reaches a scream as he slaps and jerks about the frightened child.

The opposite extreme of the deplorably uncontrolled parent is the "easy parent" who is generally the mother. She suffers from shortsightedness. She seems to forget that in a very short time her boy or girl must live in a world that will not so readily excuse and cajole as she; that Sarah's whims and Richard's petulance will not be looked upon by the general public as odd, little outshoots of human nature; but as weeds, pure and simple. Nor does she seem to realize that faults in a little child, steadily nurtured, instead of being outgrown become ingrowing!

"Sarah, what can mother get for you—don't you like your dinner, dear?" and mother, weary after preparing the family meal, snatches a bite here and there between trips to and from the pantry as she brings such food as Sarah's whims demand; while Sarah watches with sly eye, fully aware of her power.

What conclusion does one gain from observing parents with their children? That the indispensable qualities for parenthood are understanding sympathy coupled with firmness. Not uncontrolled demands for obedience, not sudden spasms of discipline, but steadfast reasonableness which creates confidence and love when it goes hand in hand with an eager desire to live understandingly in the child's world.

For after all, discipline is very much like a salad. Its perfection depends upon the proper combination of ingredients, given in right proportion. There must be sufficient oil to assist in soothing too severe a tang of vinegar, but not enough to neutralize, just a dash of pepper and mustard; and finally the hand which mixes it with the tender green—that is the touch of personality which perfects it!—Margaret S. Hard.

TO CLEAN POTS AND PANS

How to keep the pots and pans clean and sightly is one of the problems every housewife has to face. The home economics workers at the State College of Agriculture say a small amount of washing soda in the hot soapy water in which the pots and pans are washed every time they are used is a great help. A pound of the washing soda to four quarts of water makes a solution of the right strength to add to the wash water.

MISS ALEEN M. FELL

A Farmer Girl Freshman at Penna. State College

Where it is necessary to scour metal it is said that, in general, whiting as a scouring substance will give the metals the least wear. The acid of common foods such as rhubarb, tomatoes, lemons, or oranges will often remove discolorations.

How to Clean Aluminum

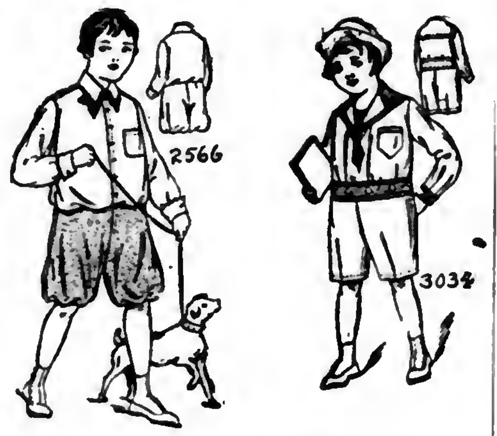
Whiting moistened with any food acid such as those mentioned above is good for aluminum. Washing soda should not be used as the alkali it contains darkens this metal.

A weak soda solution will remove grease from brass and whiting and a dilute acid will remove tarnish; brass may be polished with rotten stone and sweet oil, and dried with a soft cloth. Copper may be cleaned in the same way.

Kerosene will remove rust and grease from iron. It may also be boiled in a strong solution of washing soda. A strong abrasive, such as emery, may be used with iron

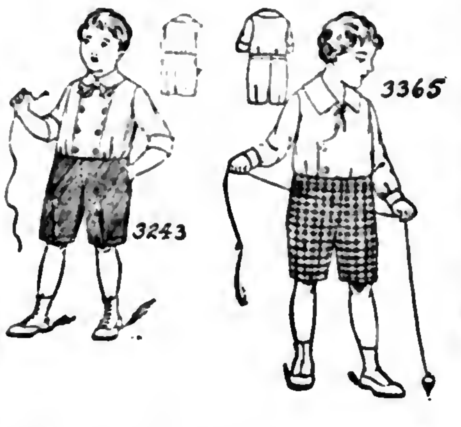
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

2566.—Popular Blouse Suit for Boys.—This suit may be entirely of serge, flannel, cheviot or mixed suiting, or the blouse may be of linen, madras, cambric, solsette, flannel or khaki and the trousers of contrasting material. The trousers are in knickerbocker style. The pattern is cut in five sizes: 6, 8, 10, 12 and 14 years. Size 12 requires 2 yards for the blouse and 1½ yard for the trousers, of 36-inch material. Pattern, 10 cents.



3034.—For Little Boy.—The design is good for serge, tweed, velvet or corduroy, with braid or stitching for trimming. The blouse could be of wash material, and the trousers of cloth, corduroy or velvet. Collar, cuffs and belt may be faced with contrasting materials as illustrated. The pattern is cut in 4 sizes: 2, 3, 4 and 6 years. Size 4 requires 2⅝ yards of 44-inch material. Pattern, 10 cents.

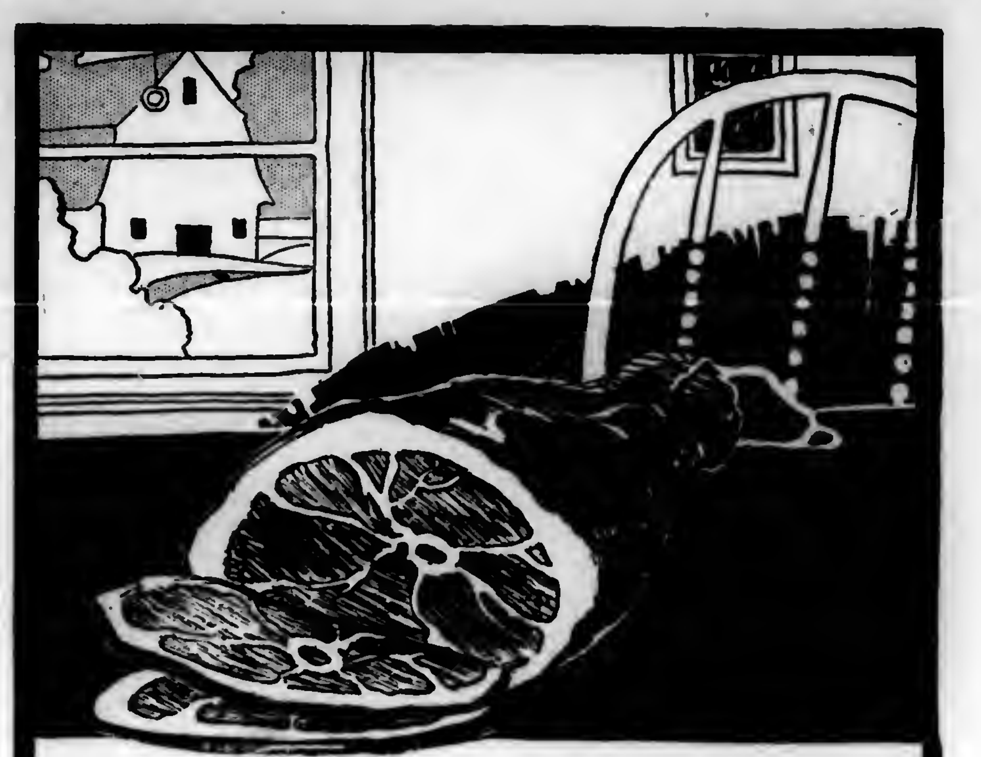
3243.—Another Suit for Small Boy.—The pattern is cut in 5 sizes: 2, 3, 4, 5 and 6 years. A 4-year size will require 2½ yards of 27-inch material. The suit may be of one material or the trousers may be of serge, cheviot, khaki or corduroy and the waist of drill, linen, cambric, percale or chambrey. The waist may be finished with elbow or wrist length sleeves. Pattern, 10 cents.

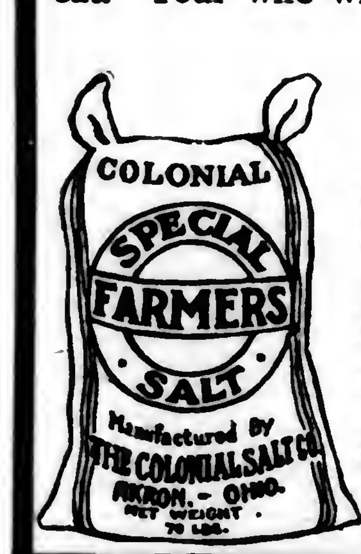


3365.—For Small Boy.—The pattern is cut in 4 sizes: 3, 4, 5 and 6 years. A 4-year size will require 1½ yard of 27-inch material for the blouse, and 1½ yard for the trousers. If preferred, blouse may be of material different from the trousers. Pattern, 10 cents.

CATALOGUE NOTICE

Send 15c in silver or stamps for our up-to-date Fall and Winter 1920-21 catalogue, containing over 500 designs of ladies', misses and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable to the home dressmaker.





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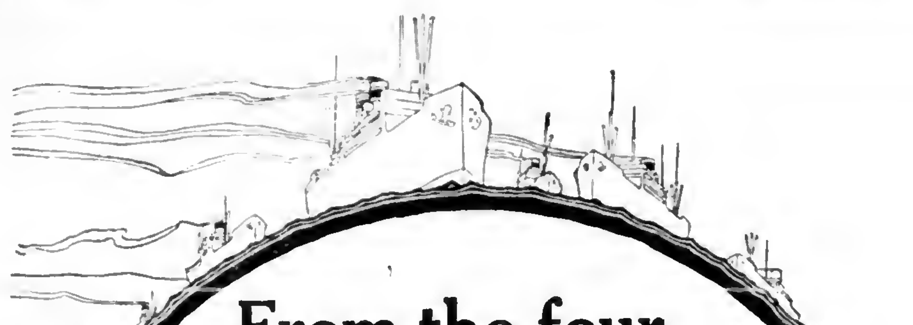

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AMERICAN FARM BUREAU CONFERENCE

The men who are leading the activities of the Mid-West Farm Bureau Federation realize that they are confronted with great problems. In order to keep step with the times district conferences are being held by the officers in various sections of the Corn Belt. The last one was held in Columbus, O., Nov. 9-10. The next will be held at Lincoln, Neb., early in January.

Secretary Murray D. Lincoln, of the Ohio Farm Bureau Federation, discussed uniformity of organization among the state farm bureaus. He pointed out the smoothly working relations of the federation and the Grange in Ohio and presented a scheme by which all farmers' organizations could function so as to maintain their individuality and special utility and at the same time enjoy the support of the pooled power of all farmers' organizations. The paid men who are maintained in practically every county will be able to assist in the proper development of these other organizations and each will thus be benefited by the farm bureau.

Inasmuch as a great many farm organizations in the past have been wrecked on the rocks of commercial operations he advised not to expect too much of the co-operative buying department. In fact, it developed that with the exception of Michigan none of the states are attempting to do extensive buying of many items thru the state organization. The most effective way to handle the purchasing operations is thru the local units, altho these may deal in turn thru the state agency.

It was agreed that all of the states could not operate on the same basis on account of varying conditions and history. It was also agreed that there was dynamite in commercial activities on a scale too extended and danger also in too great an overhead and too much centralized authority.

There was an extended discussion of the advisability of publishing an official paper or magazine by the state and national organization. The dangers and objections to maintaining an organization publication were so numerous and so logical that it was unanimously agreed that it would not be wise to attempt it. In some of the states a small folder is sent out to the members each month but even that involves quite a heavy expense. Even the state publication that carries advertising loses money to the farm bureau federation and the publicity that it carries is no more effective than if it cultivated the support of the regular farm press. It was generally agreed that it was far better to secure proper publicity thru the regularly established farm papers, even tho these papers might assume a critical attitude from time to time. The farm press is favorable to the farm bureau and whatever is said for or against its activities is usually said with good intent.

Informal discussion of dairymen's and milk producers' problems took most of the second day's program. J. W. Coverdale, Chicago, secretary of the American Farm Bureau Federation, said a conference of dairy and milk men shortly would be called by the federation to work out a suitable program. It was indicated that the question of producer-owned distribution might be taken up by constituent states and by the milk conference. Mr. Coverdale also said Pres. Howard would announce the personnel of the livestock marketing "Committee of Fifteen" shortly.

NEIGHBORLY TALKS NO. 13

The Thoughtful Neighbor

He is the man whose hens are always "at Home," but his thoughts and desires are never confined to his own acres, or fences, or interests.

He is the man with the big heart. He says: "I am going to town today. Is there any errand I can do for you, John?" Or you may run short of seed—just enough shortage to be an annoyance—and your thoughtful neighbor comes to your rescue. You say: "How much am I indebted to you?" and your neighbor replies: "O, we will place that on the running account."

We shall never be able to get even with the thoughtful neighbor. He must think up some of his deeds of kindness in the noon o' the night, when we are sound asleep.

When our Johnnie has the fishing fever, but angleworms are scarce, the thoughtful neighbor always knows of a place where the worms are just longing for a good look at Johnnie. When our watermelon crop gives out our thoughtful neighbor always has a late melon stored away, and he gladly produces it to fill an aching void in Johnnie.

When trouble comes, the thoughtful neighbor comes with his kindly ministrations. Other well-meaning people may trouble us with a multitude of words, but the thoughtful man never slops over; his quiet deeds are more comforting than all the words of the dictionary would be if they were all lavished upon us.

The thoughtful neighbor remembers when others forget; but he also often forgets what other people remember. How easily he forgets our faults, and how certain he is to remember our needs.

"Be a good boy," was the parting injunction of an old farmer to his son, "and keep the fences up." Our thoughtful neighbor always keeps his fences up. He believes in fences for cattle, but not for people. He even mends weak places in our part of the line fence, on the sly.

The thoughtful neighbor always enjoys life. He enjoys seeing other people enjoy themselves, and he usually has a streak of humor that helps make smooth sledding on the highway of life.

Let us reciprocate and be a thoughtful neighbor to our thoughtful neighbor.

RECONSTRUCTION IN FRANCE

Within two years after the armistice France has practically remade the vast area of her agricultural soil which was pitted and scarred beyond usefulness, by the ravages of the war. Figures received by the French Commission, in New York, show that out of 7,000,000 acres which were rendered unfit for cultivation by the effects of battle from 1914 to 1918, only 280,000 acres will not be in a condition to permit of sowing next spring.

The rest of the agricultural area has been restored, or will be restored, by the end of the current year. The reports to the Commission show that 4,000,000 acres, or more than half of the devastated farm land are already under cultivation. The harvest has been so good that the French Government has been enabled to cancel contracts for the import of South American wheat into France.

Christmas, in the country of all places, should be a community holiday. It's too big a thing to be kept all within your family.

PASSING EVENTS IN PICTURES

1—Mrs. Harry Norment a charming hostess of the Capital's Presidential Circle.

2—Madame Sonia Serova and Michio Itow, noted Russian Dancers.

3—Countess Kan, a Chinese lady, who has taken up horseback riding.

4—Major Horowitz, accompanied by "Princess Pat," first dog named in Army Orders to leave Fort Strong; also the Acrobatic Kitten "Catasole."

5—Mme. Anna Pavlowa, Famous Russian Dancer, and Camp Fire Girls, Manhattan Opera House.

6—Miss Natalie Kingston, of the Winter Garden is "strong" for "Apple Week."

7—Hugh Young taking a snapshot of his brother.

8—Miss Elizabeth Cosley teaching English via the Short Cut—"Speech—No Books."

The Road to Paradise

By HOPE DARING

"But, Dr. Morris, I cannot give up my work."

"Why not, Mr. Grand? You are a rich man and alone in the world. The stock market is not a thing to be loved."

The two men were in the physician's private office. Jason Grand was a man of fifty, and his years had begun to show in his increasing weight, his thinning hair, and the cloudy look in his keen gray eyes. He echoed the doctor's words.

"Why not? What would I do? I've worked so hard that I've had no time for hobbies, no time for society, not even time for friendship or love. What would I do to pass away the days?"

"Learn to play golf. Go in for charity. Buy a yacht. Adopt a family. Marry. You can do anything save keep on in the grind of business. You must get out of the office and lead a sane, out-of-doors existence, or in a year you will be a helpless invalid."

The cool, decided voice was convincing. Jason Grand asked a few questions, then left the office. He passed along the streets of Chicago, unmindful of the crowd and of the mellow autumnal air that touched his face, as if with caressing fingers.

What was wrong with his scheme of life? Years ago, when a college student, he had vowed to become a rich man; that had been his aim in life. Had he been happy while acquiring the wealth that afforded him so little satisfaction? Happy! The word had no personal meaning for him. He had been busy, making money. Success had come to him; he was a rich man. Never had he planned beyond that. Now he must stop. But how?

Glancing around he saw a car stopping at the next corner. "I'll do it," he muttered. "I must get away and think this out."

Boarding the car he rode to a railroad station. His business affairs were in such perfect shape that he could absent himself from his office for a few days, confident that all would go on well. He would not be missed at the hotel where he occupied a suite of rooms. But where should he go?

The man before him at the ticket seller's window asked for a ticket to Rockford and was told that his train would leave in five minutes. Grand purchased a ticket for the same place. He made his way to the train and took a seat in the parlor car. In his haste he had forgotten to provide himself with the newspaper that was his sole literary diversion. The doctor had forbidden smoking, and, if he was to give up business, there would be no satisfaction in planning his next deal. How was he to occupy himself until he reached Rockford? What would he do when he arrived there?

When the train was out of the city, he glanced out of the window. For the first time in years the beauty of the landscape attracted his attention. The train was passing thru a farming country, a succession of low, gently-sloping hills and wide valleys. The comfortable farmhouses were set around with evergreens and with maples on whose branches the red-gold leaves stilll gleamed in the sunlight. The woodlands were gay with copper, cardinal, maroon, and crimson. The train swept thru a huge cornfield where long rows of brown shocks alternated with heaps of yellow corn. A river went slipping along, its course outlined by low-growing willows. And over all brooded a sky of softest blue.

"After all the world is a good place," Jason admitted a little grudgingly to himself.

An hour went by, and he continued to watch the passing scene, conscious of a strange pleasure in it. Suddenly a girl in the seat ahead of him called:

"O see! Mother, see! That is surely the road to Paradise!"

Jason leaned nearer the window. The train had halted at a small town and, moving slowly, was not yet fully under way. As it passed a country road that crossed the track, the man found himself staring down the highway. On both sides, close up to the trail, grew low trees and tangled underbrush. There was the vivid red of the sumac, the somber purple-brown of the young oaks, the green of the scraggly cedar, and the flame-like foliage of sassafras shrubs. A little way down the road a maple dropped a bright red branch over the track, like a triumphal banner.

The road to Paradise! She was right. Why should he not follow it? Grand sat up, beckoning to the porter. "What was that little station we just passed?"

"Dundee, sah."

"And the next one? How far is it?"

"Kent City. Its' ten miles on."

"I want to get off there," and a dollar changed hands.

Grand remained on the platform until the train had passed. Then he entered the station, to find out when he could return to Dundee.

"Not 'til four, an' that train's most always late. Carried by, was you?"

Jason nodded and strode out of the station. At first he considered hiring an automobile to take him back to Dundee, but finally concluded, as there was nothing to hurry him, he would wait for the train. It was an hour late. When they approached the little town, it was too late to get a good view of the magical highway.

Dundee was small, but there was an air of thrift about the place. Jason engaged a room at the hotel, went out and bought himself the articles he would need for a short stay, returning to the hotel for a good supper.

It was late when he woke the next morning. After a hearty breakfast he went out of doors. "Now how am I to find my way to Paradise?" he asked himself whimsically. "To inquire would be to subject myself to ridicule. It can not be far, and I'll walk."

He started off, folowing the railroad track. That day was like the one that had preceeded it. The winy fragrance of the fields roused in Jason's mind memories of his boyhood. So many interesting things as there were all about him! There was the gleam of a far-away little lake, a shower of golden leaves rained down by a passing breeze, and the wooded slope of a hill with the soft blue sky for a background. Suddenly Jason came to a stop, saying to himself, "Here it is, and it looks just as it did yesterday. If it is not the road to Paradise, it should be."

He was conscious of a sense of relief; all the morning he had been haunted by the fear that the road, when discovered, would prove disappointing. Reassured, he swung down the highway at a brisk pace.

Five minutes walk brought him to the end of the tangled growth that skirted the road. Level fields stretched away on both sides, some green with a late growth of grass, others bare and brown from the summer's harvest. A gurgling little brook crossed the road, spanned by an artistic bridge. Beyond it stood a brown cottage overgrown with woodbine and ivy and shaded by tall elms and low fruit trees.

"It looks like a magazine illustration," Jason thought. "All it needs is the human touch, and here that is—the eternal feminine."

A middle-aged woman had opened the gate and walked towards the mail box. She was slender, alert, carrying her uncovered iron-gray head a little thrown back. As Jason advanced he was struck by the expression of her face. It was serene, as if in life and living she had found perfect contentment. To his surprise she held out one hand.

"It is—why, it is Jason Grand."

"Can it be Hilda Gay Mitchell?"

"Why not?" she asked with a laugh. "Even Chicago is a little place; people who live in its shadow may meet occasionally."

She belonged to his youth, altho he had almost forgotten her existence. They had grown up in the same neighborhood. Hilda had married his cousin, Roger Mitchell, and the two faced the future blithely, both planning to win literary triumphs. Three years after their marriage Roger died. At the time Jason had vaguely felt that he should do something for Rogers' mother, who was left dependent upon the young widow. But at that time he was hard pressed. He sent his aunt a ten-dollar bill. In his struggle to make money he had forgotten the two women.

"Were you coming to see your aunt?" Mrs. Mitchell asked. "She is very feeble, but she will be delighted."

"I just stumbled on the place. Sit down and tell me all about it."

She led the way into the yard where a rustic seat surrounded one of the great elms. "It is your story that is worth telling. Life has been quiet for mother and me, just busy and glad."

Briefly she sketched the years since her mother's death. She had taught in the city until the senior Mrs. Mitchell's health failed, and then they bought the little farm where they now lived.

"For five years I taught the rural school. Then I could not leave mother alone, not even for the day. I raise chickens and—please do not laugh—edit a poultry journal. For recreation I still try to write poetry. How about yourself?"

"I can tell it in few words. I have done nothing but make money. Now that the doctor tells me I must stop that, I am at a loss what to do with myself. All I know is the stock market; the world of books, music, art, family interests, is closed to me."

"How did you chance to come strolling up the road?"

He told of his starting on the aimless journey and of the girl's exclamation. "This may be the road to Paradise, Hilda, but I am sure its opening paths were not easy for you. Why did you take upon yourself the care of Aunt Mary?"

Her dark eyes looked questioningly into his: "Why she is Roger's mother. All these years to care for her was something I could do for him. And the library I have been able to establish in Dundee, the work I have done for the boys and girls of the town and of the surrounding country has been my work for the children for whose coming Roger and I planned."

He leaned nearer her. "I believe you have been happy, if you have been poor, hard-worked, alone. Is that what one must have if he travels on the road at Paradise—love for others?"

"I think it is. Yes, I have been happy, altho it is not easy for a woman to face life alone. Always I have had books, the dear out-door world, and work for others. One who lives on the road to Paradise does not need much else. Wealth would increase one's helpfulness, but there are better things to give than money. Now come in and see mother."

Jason stood up. On his face was the look of one whose nature had been stirred to its depths. "Hilda, is it too late for me to start to travel on this highway?"

"It is never too late. But do you want to go? It leads away from the land where you have elected to live."

For a moment he stood in silence. What was it that was calling him Was it the outdoor world, the motives and aims of this serene-faced woman, or was it the woman herself? At all events the way led on, away from the things that had, in his hour of need failed him. He held out his hand.

"Yes, Hilda, I want to go on in this way. You will help me until I am strong enough not only to walk alone but also to help others. Now let me walk alone for a half hour, and then I will come in to you and Aunt Mary."

She watched him out of sight, then went forward, to take her mail from the hand of the rural carrier who had stopped at the gate. "Oh, the poem has been accepted!" she crooned "Life is good on the road to Paradise. I must show Jason Grand that it is the highway of service."

QUIET WAYS ARE BEST

What's the use in worrying,
Of hurrying
And scurrying
And breaking up their rest?
When everyone is teaching us,
Preaching and beseeching us
To settle down and end the fuss;
For quiet ways are best.
The rain that trickles down in showers
A blessing brings to thirsty flowers;
Ang gentle zephyrs gather up
Sweet fragrance from each brimming cup
There's ruin in the tempest's path,
There's ruin in a voice of wrath,
And they alone are blest,
Who early learn to dominate
Themselves, their violence abate,
And prove by their serene estate
That quiet ways are best.

PLAYING THE GAME

Business is as much a game as golf or baseball or football.

Life itself is aptly likened to a game.

To win, to earn and enjoy the fruits of victory, you must play fair.

Among the Christmas Gifts

For the grown-ups or the nearly grown-ups, a Kodak for pictures of the post card size, 3¼ x 5½ inches. It is familiarly known to hundreds of thousands of enthusiasts as the "3A". It makes the largest picture available in "pocket photography". The 3A will really go into the side pocket of almost any coat. Frankly, however, it is more conveniently carried in an overcoat pocket—or slung over the shoulder in a case. Excise war tax and all, the Junior model, with a fine Rapid Rectilinear lens, sells at $24.64—and with the Kodak Anastigmat *f*.7.7 lens, at $30.62. There are other more expensive models—all have the Kodak simplicity—and they all make good pictures.

A gift for the one who already has a larger Kodak—the Vest Pocket. You don't carry a Vest Pocket Kodak—you wear it, like a watch. It is always ready to picture the unexpected and the unusual. The price, including the excise war tax, is $9.49.

For the boy or girl in high school—the No. 1 Kodak Junior. There's always room for it in the pocket, and the Kodak story of the school days is one that not only gives fun in the making but in its album form becomes a permanent delight to the whole family. The price of the No. 1 Autographic Kodak Junior is $16.67, including the excise war tax.

For the little folks—a No. 0 Brownie. These little cameras have good lenses and shutters and finders, and use the same film and make the same size pictures as the Vest Pocket Kodak. You will be astonished by the good work they do; you will be even more astonished at the intelligent way in which a youngster of seven or eight will go about picture-making with a No. 0 Brownie. The price, including war tax, is $2.86.

This page gives only a hint of the Kodak and Brownie line—there are Brownies for pictures of every size that Kodaks make, and there are Kodaks with high speed shutters and rapid lenses—there are folding Brownies as well as box Brownies—but they all have one common characteristic—they make good pictures. And all Kodaks (except Stereo and Panoram) and all *folding* Brownies have something else in common—they are Autographic, and when used with Autographic film provide for the instant titling of every negative at the time it is made. And the Autographic costs no more than other film.

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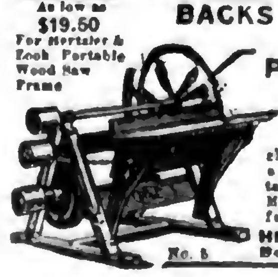

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IS A SALT FAMINE COMING?

People who remember the "salt famine" scare of 1917 will recollect that the acute shortage in this commodity that resulted in the Eastern States was not due to any shortage of production but to over-buying on the part of the public.

Again following the Armistice in November, 1918, there was a general suspension of buying on the part of the wholesale trade which was waiting for lower prices. Many jobbers reduced their stocks of salt to almost nothing before ordering more, and when they found that prices were not going down, but up, the salt manufacturers were so flooded with business that they could not begin to fill their orders promptly. The ensuing collapse in the railroad service helped still further to create a salt shortage in certain localities, not because of any shortage in production but because of difficulties in distributing. Just as over-buying by the public in 1917 created an artificial shortage in many sections, so under-buying on the part of the wholesalers late in 1918 brought its own penalty the following year.

Today, however, a situation exists in the salt industry which is more than likely to create an actual shortage than was the case in 1917 or in 1919. Some two months ago one of the largest producing plants in the United tSates was totally destroyed by fire. This plant had a capacity of 5000 barrels per day. Packed in two-pound bags this amount of salt would have supplied 700,000 families daily. So far no attempt has been made to rebuild this plant and nobody knows whether it will ever come into production again or not. Besides this, the excessive price of coal has caused a number of the smaller salt producers to shut down their plants altogether rather than operate at a heavy loss. The larger producers, for their part, are running on short time and accumulating no stocks.

To further complicate the situation, the wholesale grocery trade thruout the country, as was the case two years ago, has been buying on a hand-to-mouth basis for several months, fearing a general decline in prices. Many of the jobbers have lost heavily on sugar and no doubt fear a similar collapse will happen in salt. They overlook the fact, however, that salt, unlike sugar, was never a speculative commodity and that while the manufacturers are now paying the highest prices for coal they have ever known there is not much likelihood of any reduction.

LIBERALITY IMPROVES SCHOOLS

Owing to the agitation within the past eight months by the mothers of the several school districts, the little school at McClean, N. Y., our natural center, has been metamorphosed in the service it is giving its patrons, merely because public opinion made it possible for the schol board to dare to pay the principal $2000 a year, making sure they had a man fitted to earn it; and they, also, hired only professionally trained teachers in the other two rooms.

You cannot realize what a change there is in the work of the school! Now several parents in nearby districts find it worth while to send their children in to McClean, even though they have to pay tuition while still paying taxes to maintain the usual poor school in the districts, because we have been unable to show the districts that their best procedure is to close the district schools, send all the children in to McClean and have one real, good, big school. But it is coming!

In our own district, due to the increased help from the state, we are paying an untrained teacher $24 a week to teach three little boys. An obvious misuse of public funds and there should be a law to prohibit it. —F. G. M.

THE FARM PRODUCTS SHOW

In connection with and as a part of the Fifth Annual Farm Products Show to be held in Harrisburg, January 24-28, the greatest assemblage of agricultural organizations in the history of the state will take place. No less than ten different and distinct agricultural organizations will hold their annual conventions and business meetings in Harrisburg during the time the show is in progress, and these meetings will bring thousands of agriculturists together from every nook and corner of the state.

Included in the list of organizations that will meet in conenction with the show are:

State Horticultural Association of Pennsylvania, Pennsylvania Breeders' and Dairymen's Association, Pennsylvania Holstein-Freslan Association, Pennsylvania Potato Growers' Association, Pennsylvania State Bee-Keepers' Association, Pennsylvania State Poultry Association, Tobacco Growers' Association, Pennsylvania Nurserymen's Association and the Pennsylvania Sheep Breeders' and Wool Growers' Association.

In addition, the Pennsylvania State Veterinary-Medical Association will hold its annual convention as a part of the show, the veterinarians being closely allied with the agricultural interests of the state.

Every available hall in Harrisburg has been secured by the Pennsylvania Department of Agriculture for the holding of the various meetings. In addition to the business session, the various organizations have prepared educational programs and speakers of state and nation-wide reputation are being furnished by the State Department of Agriculture and by Pennsylvania State College.

The show will be officially opened Tuesday morning, Jan. 25, and will close Friday afternoon, Jan. 28. More than twice the amount of space available last year has been secured for the show proper, this year and it is believed that all attendance figures will be broken.

The Potato Growers' Association alone is expecting at least 400 of the leading potato growers of the state in attendance at the show and the association meetings while the other organizations are expecting equally large crowds. Practically all of the farmers will be accompanied by their families and in addition there will be a small army of agriculturists who are interested in the show alone and are not affiliated with the various organizations.

DELAWARE CORN SHOW

The Delaware Corn Growers' Association offers $20 in prizes in an "Open to the World Class" for the 10 ears of corn shelling the most grain by weight together with the highest percentage of shelled grain. The annual corn show will be held at Delaware College, Newark, Del., Dec. 28 to 30, and all applications for entry as well as all samples of corn must be in to the Secretary not later than 11 A. M. on the 28th. Address all communications to Secretary, Delaware Corn Growers' Asso., Newark, Del.

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The three big points which make the "U. S." Walrus so popular

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It's an all-rubber overshoe that's absolutely waterproof. It has a warm, snug-fitting fleece lining. It's convenient because you slip it right over your leather shoe—and push it off with your toe when you're through.

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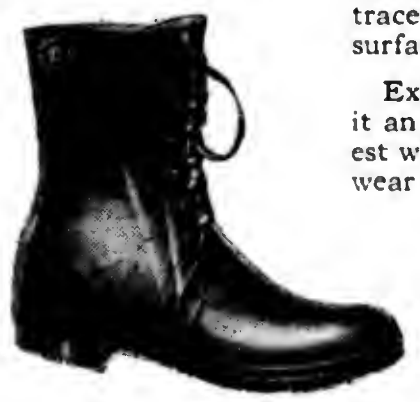
U. S. Boots have all the wear and comfort which the accumulated improvements of 74 years have given them.

U. S. Bootees lace on over the sock like a leather shoe. You can wear them all day long in the wettest weather. Your feet will stay dry and comfortable.

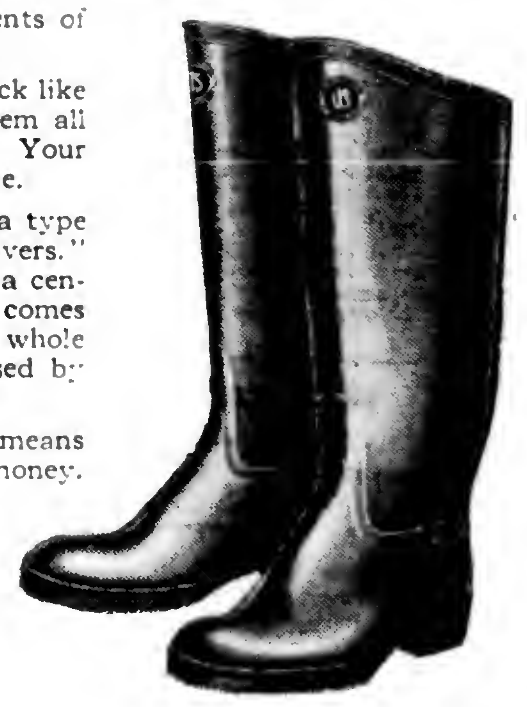
The U. S. line of footwear has a type for every need—arctics, rubbers, "overs." Every one is backed by over half a century of experience. The rubber comes from our own plantations—the whole process of manufacture is supervised by experts.

Always look for the U. S. Seal—it means solid wear and long service for your money.

"U. S." Bootees—Worn over the sock like a leather shoe. Two styles, high and low. In red, black and white



"U. S." Boots—are made in all sizes and styles: Hip, Half-hip and Knee. In red, black and white



United States Rubber Company

Look for this seal on all "U. S." Footwear

Markets

PHILADELPHIA PRODUCE

—November 29, 1920.

With the Thanksgiving holidays over, the trade is once more settling down to their usual general lines of fruit and vegetables. The supplies of potatoes are gradually being reduced, partly caused by prevailing low prices. Penna. potatoes are $1.50@1.85 per cwt. with fancy potatoes $1.85@2 cwt. Eastern Shore Hoosiers are low at $1.75@2.25 bbl., while nearby N. J. potatoes, ⅝-bskt. only bring 60@75c bskt. for No. 1s and 25@40c ⅝-bskt. for No. 2s. The market is oversupplied with very poor Eastern Shore sweet potatoes and for that reason the low price of $1.25@1.75 bbl. in prevailing. There are some good Delaware sweet potatoes here selling 25c@$1.50 hmpr., the N. J. House sweet potatoes are selling at $1@1.25 ⅝-bskt.

Vegetables—Brussels Sprouts from L. I. at 15@20c qt. Beets nearby 3@6c bch., loose beets, $75c@$1 hmpr., 40@60c ⅝-bskt. An embargo has been placed on cabbage, and prices are taking a very wide range. Domestic cabbage sold from $6@12 ton. Danish sold $10@$18 ton. Carrots, N. Y. state, $1.50 cwt., nearby washed carrots at 50@85c ⅝-bskt. A little cauliflower L. I. sold at $3@3.25 crate. Celery, N. Y. state, at 75@90c bch. Onions are dull and selling at 75c@$1.40 cwt. Mushrooms, $1@2 bskt. Parsnips, 60@75c ⅝-bskt. Turnips and rutabagas at 25@60c ⅝-bskt., for white and 50@90c ⅝-bskt. for yellows. N. J. spinach at 50@65c ⅝-bskt. Watercress at 2½@3c bch.

Fresh Fruits—Apples, market is ruling firmer on strictly fancy large apples, the market slow and draggy on common and ordinary apples. Prices were as follows: Per bbl., Baldwins, $4@5.75; Ganos, $3.50@4.50; Grimes Golden, $4@6.25; Gillflower $4@5.50; Greening, $4@5; Spys, $3.50@4.75; York Imperial, $4.50@5; Stayman Winesap, $4@6.50; Black Twigs, $4@5; Rome Beauty, $5@6; Kings, $4@5.50; Spitz $4@5; other varieties, $3.50@5; apples per box, Jonathans, $2.25; Stayman Winesaps $2@3.50; Grimes Golden, $2@3; King David, $2@2.75; Wagners, $1.75@2.75. Apples in bulk, $1@2 per cwt. Pears sold as follows: Seckels, $3.50 bu.; Sheldons, $1.75@2.75 bu.; Anjous, $1.75@2 bu., and $4 bbl.; Lawrence, $1.75@2 bu., and $5@5.50 bbl.; Clairgeau, $2 bu. and $6 bbl.; Da hoss 75c@$1.50 bu.; Bourre Bosc, $3 bu. Cranberries are selling at $10@11 half bbl. boxes at $6.50@7, small 32 qt. crates $2.50@4.50.

Poultry—There is good demand for dressed turkeys with best bringing 55@60c lb. and poorer, 40@50c lb. Fancy fowls active, 38@40c lb. with small and inferior steady at 32@35c; roasting chickens at 33@38c; broilers at 41@47c lb. Ducks remain unchanged 35@40c and geese 30@33c lb. There has been practically no change in live poultry as fowls are selling at 26@30c lb. for heavy and 20@25c for small and medium. Fancy spring chickens 24@27c lb. ordinary, 20@24c lb. Ducks, 21@30c; fancy turkeys, 45@50c lb. and ordinary at 38@43c. Geese, 25@30c.

Eggs—There has been no change in the egg market, the following prices remaining steady. Pennsylvania and nearby current receipts, 80c doz., nearby firsts, 82@84c doz., and fancy selected at 93@94c doz. Western firsts are quotable at 77@80c doz. with extra firsts at 82@84c doz.

LANCASTER PRODUCE

—Nov. 27, 1920.

Usually the market day following Thanksgiving is small but this morning's was an exception. Many farmers attended with an abundance of produce but light supply of poultry. Prices did not vary much from the pre-Thanksgiving market of last week. The quotations:

Butter and Eggs—Fresh eggs, 90c doz.; country buter, 70@75c lb.; creamery butter, 80c lb.

Poultry — Dressed fowls, $2@2.25 each; broilers, $1@2 each; squabs, 50c@$1 each.

Vegetables—Parsnips, 10c box; spinach, 15@20c ½-pk.; turnips, 30c ½-pk.; peppers, 2@3c each.; cucumbers, 5c each; potatoes, 20c ½-pk.; $1.20@1.25 bu.; sweet potatoes, 75c bu.; cabbage, 5c head; cauliflower, 15@25c hd.; lima beans, 25c pt.; onions, 10c box; red beets, 5c bch.; beans, 30@40c ½-pk.; rhubarb, 3@5c bch.; tomatoes, 10@15c box.

Fruit—Peaches, 10@15c qt.; apples, 15@20c ½-pk.; pears, 25@30c ½-pk.

Miscellaneous—Scrapple, 20c lb; pudding, 30c lb.; hominy, 12@15c pt. cider, 40@50c gallon.

YORK PRODUCE

—Nov. 27, 1920.

The markets of the week were slower than usual, it was expected Thanksgiving Day would give us a brisk market at least one day, but this was not the case. Eggs declined 5c dozen.

Eggs—80@90c dozen

Butter—Country, 65@70c lb.; separator, 70@75c lb.; milk, 14c qt.

Poultry—Hens, 25@30c lb.; dressed, $1@$2.50 each.

Vegetables—Potatoes, 10@25c ½-pk.; $1.25 bu.; cabbage, 3@8c hd.; lettuce, 5@20c hd.; beets, 5c box; onions, 5c bch.; 20c ½-pk.; peppers, 15c doz.; soup beans, 25c qt.; squash, 3@5c ea.; celery, 5@25c stalk, ham sliced, 40@90c lb.; whole, 40@50c lb.; lard, 25c lb.

Fruit—Apples, 15@45c ½-pk.; pears, 8@10c box; 20@35c ½-pk.; tomatoes 3@10c each.

Retail Grain Market — Wheat, $2; corn, $1.50; oats, $1; rye, $1.45 bran, $2.75 cwt.; middlings, $3 cwt.

Wholesale Grain Market—Wheat, $1.65; corn, $1; oats, 55c; rye, $1.25; bran, $48 ton; middlings, $56 ton.

NEW YORK PRODUCE

—Nov. 27, 1920.

Butter weak; receipts, 5780, creamery, higher than extras, 57½@58c; extras (92 score), 57c; firsts (88 to 91 score), 46@56c; packing stock, current make No. 2, 29c.

Eggs steady; receipts, 9133; fresh-gathered extra firsts, 83@85c; firsts, 76@81c; state, Penna. and nearby western hennery whites firsts to extras, 95c@$1.08; state, Penna. and nearby hennery browns, extras, 90@93c; do gathered and mixed colors, firsts to extras, 77@88c; refrigerator firsts to finest, 57@60c.

Cheese irregular; receipts, 3683; state, whole milk, flats, held specials 27@29c; do average run, 24½@26½c; state, whole milk flats, fresh, specials, 25@26c; do, average run, 23½@24½c.

Poultry—Live, not quoted; dressed, steady and unchanged.

Vegetables—Potatoes in free supply and selling very slowly, with tone weak and outside quotations extreme. Sweet potatoes in light receipt and Eastern Shore advanced to $1.75@2.25, with very few below $2. Potatoes, state, bag, $2.85@3; L. I. bbl., $4@4.50; Southern, bbl. $2.50@3; sweets, dy. ½s bskt. $1@1.50; dy. 2s, bskt. 50@75c; beets, nearby, bbl. $2@3; nearby, bag, $2@2.50; nearby, bskt 75c@$1; cabbages, bbl. $1@1.50; 100, $2@4; Dom. ton. $12@15; red, bbl. $1@2; onions, state and W'n, red, 75c@$1.50; pumpkins, cheese, $2; parsnips, bbl. or bag, $2.50@3; parsley, nearby, 100, $1@2; nearby, bskt 50@75c; Balt., bskt. 50@75c; Va., bbl. $1.25.

Fresh Fruits—Apples, bskts. fancy, $1.25 bbl. York Imp., $3.50@4.75; S. Winesap, $1.50@5; Baldwin, $4@5; N. Spy, $3@4.50; Jonathan, $4@6; 20-Ounce, $2.50@5; Greening, $3@5; Delicious, $2.25@4.25; pears, bbls. Keiffer, $2.50@3; Lawrence, $4@5; Seckel, $6@9; cranberries, E. Ilk bbl., $9@11; grapes, state, Cat'ba, 90c; Concord, bskt., $1.25@1.50; Colmar grapes, imported, lb., 50c; Avocado pears, Fla. fancy, box, $15@18.

PITTSBURGH PRODUCE

—Nov. 27, 1920.

Butter—Prints, 60@60½c; tubs, 59½@60c; cooking, 45@50c; Ohio, 55½@56½c.

Cheese—New York full cream, 31@32c; Wis. Swiss, 19@50c; do 7-lb. brick, 31@32c; Swiss, 5-lb. block, 33@34c; Longhorns, 31@32c; Limburger, 1-lb. 34c; do 2-lb., 33c.

Eggs—Fresh select, 85@90c; current receipts, 76@80c; candled storage, 62@65c; do at mark, 58@60c.

Vegetables—Potatoes, Mich., sack, $3.35@3.50; sweet potatoes, E. Shore, bbl., $2.50@3.75; onions h. g. 100-lb. sack, $1.75@2; cabbage, h. g., bbl., $1.75@2; cauliflower, L. I. crate, $4.50@4.75; turnips, bu., $1.50@2; mushrooms, bskt., $1.75@2; carrots, bu., $1.25@1.50; celery, bunch, 40c@$1; parsnips, bu., $1.25@1.50.

Fruits—Apples, bu., $1.50@2; do bbl., $4@6; do Wash., box, $3.25@5; pears, Kiefer, bu., 75c@$1; do Oregon, box, $6@6.50; grapefruit, crate, $5@7; cranberries, bbl., $15@16; grapes, Almeria, Spanish, keg, $4.75@15; do Tokay, crate, $2@2.75; do Concord, 20-lb. bskt. $1.40@1.50; Cassaba melons, box, $2@2.50; mixed nuts, box, $5@5.25.

LIVESTOCK MARKETS

—Nov. 29, 1920.

CHICAGO

Hogs—Receipts, 6000; market active and mostly 10c higher, closing strong; bulk of sales, $9.85@10.15; top, $10.25; heavy weights, $9.80@10.25; medium weights, $10@10.25; light weights, $9.80@10.15; light lights, $9.70@10; heavy packing sows, smooth, $9.35@9.75; packing sows, rough, $9.10@9.35; pigs, $9.25@10.

Cattle—Receipts, 3000; compared with a week ago, native and western beef steers, 25c to 75c higher; cows and heifers around steady, canners and cutters 15c to 25c higher; light and handy veal calves $1 to $2 lower; stockers and feeders steady to 25c higher.

Sheep—Receipts, 2000, compared with a week ago, fat sheep, lambs and yearlings 25c to 50c lower; feeders, 50c to 75c lower.

NEW YORK

Cattle, receipts, 700; no trading.

Calves—Receipts, 560; steady; veals, $11@17; culls, $9@10; fed calves, $6.50@8; grassers, $5@6; yearlings, $4@4.50; westerns, $4.50@10.

Sheep and Lambs—Receiptis, 2600; sheep, ewes, $3@3.50; culls, $2@2.50; mixed sheep, $6@6.50; wethers, $7.25; yearlings, $7@8; lambs, $10@12.25; culls, $8@9.

Hogs—Receipts, 3640; steady at $11; roughs, $9.

PITTSBURGH

Hogs—Receipts, 1500; higher, heavies, $10.50; heavy yorkers, $10.90@11; light yorkers, $10.75@10.85; pigs, $10.25@10.50.

Sheep and Lambs—Receipts, 500; steady, top sheep, $6.50; top lambs, $12; higher.

Calves—Receipts, 150; steady; top, $16.

EAST BUFFALO, N. Y.

Cattle—Receipts, 625; dull.

Calves—Receipts, 200; steady, $4@17.

Hogs—Receipts, 3200; 50@75c higher; heavy and mixed, $11@11.25; yorkers, $11.25; light yorkers and pigs, $11.50; roughs, $9.25@9.50; stags, $7@8.

Sheep and Lambs—Receipts, 8000; lambs, 50c higher; lambs, $6@13; yearlings, $6.50.

PHILADELPHIA LIVESTOCK

Nov. 27, 1920.

Receipls for week ended Nov. 27.

	Beef cattle	Sheep & lambs	Hogs.
Totals for week	3826	8146	14680
Previous week	2148	8974	10367

Receipts of calves were 2469 head, as against 1631 previous week.

Beef Cattle—Steers and cows were dull and lower, with supplies in excess of requirments. Veal was weak and easier, with buyers indifferent and holds anxious to sell. Quotations: Steers, good to choice, $11.50@13.50; fair to good, $10@11.50; common to fair, $8.50@10; cows, western, good to choice, 7½@8½c; do fair to good, 6½@7½c; bulls, 5½@8c; calves, extra to choice, $16.50@17; fair to good, $14@15; common, $11@13; Tennessee, $15@16; other southerns, $8@13.

Sheep and Lambs—There was a fair demand for sheep of desirable quality and values were steadily maintained. Lamb of desirable quality was slightly firmer. Offerings were only moderate and demand was fair for choice stock. Quotations: Sheared sheep, wethers, extra, $7@7.50; do, good to choice, $6@6.50; medium, $5@5.50; do, common, $2@3; ewes heavy, fat, $5@5.50; lambs, spring choice, W. Va., $11.75@12.25; choice Penna., $11.50@11.75; medium, $10@11; common, $8@9.

Hogs—There was a fair demand for western hogs and prices were slightly firmer. Nearby stock was quiet and prices were without important change. We quote: Best western, $13.50; nearby, $11@11.50.

City Dressed Stock—Steers, heifers and cows were in moderate request and prices showed no important change. Veal was quiet and easier, with supplies sufficient to cover trade requirements. Sheep and lamb of desirable quality were in fair request and generally steady. Hogs were dull and lower. We quote: Steers, 17@24c; heifers, 14@18c; cows, 10@16c; calves, city dressed, choice, 28@30c; calves country dressed, 26@28c; lambs, spring choice, 25@27c; sheep, 10@13c; pigs, 19c.

PHILADELPHIA DAIRY MARKET

—Nov. 27, 1920.

Butter—Receipts, 2130 tubs. The market was unsettled and largely nominal, with virtually nothing doing. The quotations are as follows: Solid packed creamery, fancy, high-scoring goods, 62@64c; the latter for jobbing sales; extra, 61c; extra firsts, 58@60c; firsts, 45@54c; seconds, 35@43c; sweet creamery, choice to fancy, 63@65c; fair to good, 52@62c; ladle packed as to quality, 32@34c; packing stock, 25@30c; fancy brands of nearby prints were jobbing at 70@72c; good to choice, 60@69c; fair to good, 57@59c.

Eggs—Receipts, 2914 case; strictly fine, fresh eggs were scarce and firm under a good demand, but unattractive stock was little wanted and irregular in value. The quotations are as follows: Nearby firsts, 82@84c doz.; nearby current receipts, 80c doz.; nearby ordinary to fair, 70@76c; western extra firsts, 82@84c; firsts, 77@80c; inferio. lots lower; jobbing sales of fancy candled fresh eggs 93@94c; fair to choice, 82@92c.

Cheese steadily held but quiet. The quotations: New York, whole milk, flats, fancy, held, 28@28½c; do, fair to good, held, 25@27c; do, fancy fresh, 25@25½c; do common to fair, fresh, 22@24c; longhorns, held, 28½@29c; do fresh, 28@28½c; single daisies, held, 28@28½c; do, fresh, 27@28c; jobbing sales of fancy held goods, 30@31c.

PHILADELPHIA HAY AND GRAIN

—Nov. 27, 1920.

Baled Hay and Straw—Receipts, 216 tons of hay and 2 cars of straw. Sold slowly at former rates. Quotations: Timothy hay, No. 1, none here; No. 2, $29@30; No. 3, $27@28; sample, $22@24; no grade, $18@20; clover mixed hay, light mixed, $29.50@30; No. 1 mixed, $27@28; straw, No. 1 straight rye, $21@21.50; No. 2, $19.50@20; No. 1 tangled rye, $17.50@18.50; No. 2 do, $17@17.50; No. 1 wheat straw, $17@17.50; No. 2 do, $16@16.50.

Brain quiet and prices favored buyers. We quote: Car lots, including sacks, soft winter bran in 100-lb. sacks, per ton, $42@43; spring bran in 100-lb. sacks, per ton, $41@42.

Wheat—No. 2 red winter, $1.80@1.85; No. 2 red winter, garlicky, $1.60@1.74.

Corn—Dull and largely nominal at 96@98c for No. 2 yellow.

Oats—Car lots, as to location, No. 2 white, 60@60½c; No. 3 white, 59@59½c.

NEW YORK HAY AND GRAIN

Feed.—The market for mill feed was weak at the lower prices established on Friday. The demand was very slow, altho it was hoped that buyers will be more disposed to take hold at the new levels. The weakness in wheat, however, and the general unsettled condition of the market in general served to disturb confidence and consumers are not buying more than they actually need.

Quotations: City feed bran, $40; middling, $40, in 100-lb. sacks; red dog, $62.50; nominal, in 100-lb. sacks; Western spring bran, $39.50; standard middling, $38; flour middling, $40; red dog, $58, all in 100-lb. sacks, 30-day shipment. Oat feed, $22; rye middlings, $39; white hominy feed, $43, all in 100-lb. sakes. Cottonseed oil meal, $41.50; linseed oil meal, $48, in 100-lb. sacks.

Hay and Straw—There is an abundance of hay at all harbor points, trade is most unsatisfactory and values continue downward. We made very little change in quotations today in the absence of business, but buyers in search want very want at about their own prices and values are largely nominal. Straw was dull and weak. Hay, large bales, timothy, No. 1, $37; No. 2, $33@35; No. 3, $29@31; shipping, $26@29; no grade, $16@23; clover mixed fancy, $36; No. 1, $31@33; No. 2, $25@28; small bales, No. 1, $29@31; No. 2, $24@26; straw, large bales, rye, $19; oat, $14@16; bundled wheat, $15; tangled wheat, $13@14.

Wheat—No. 2 red, c i f, $1.80¾; No. 2 hard winter, $1.80¾.

Corn—No. 2 yellow, 96¼c.

Oats—No. 1 white, 61½c; No. 2 white, 61c.

Rye—c i f, $1.59. **Barley**, c i f, malting, $1.01@1.06; feeding, 90@96c.

PITTSBURGH HAY AND GRAIN

—Nov. 29, 1920.

All grades of hay weak. Receipts have been quite heavy lately and the demand has not veen very active. This latter condition, no doubt, has been caused by the mild weather. Buyers are holding off only purchasing their immediate wants, anticipating lower values in the general trend of prices. Straw showing more strength than hay. Receipts light and the demand fairly good. Oats, ear corn and shelled corn. No. 1 timothy, $30.50@31; standard timothy, $28@29; No. 2 timothy $27@27.50; No. 3 timothy, $23.50@24.50; No. 1 light clover mixed, $28@29; No. 1 clover mixed, $29@30; No. 2 clover mixed, $26.50@28; No. 1 clover, $30@31; No. 2 clover, $25@27; No. 1 oat straw, $17@17.50;; No. 2 oat straw, $16.50@17; No. 1 wheat straw, $16.5@17; No. 2 wheat straw, $16@16.50; No. 1 rye straw, $17@17.50; No. 2 rye straw, $16.50@17; No. 8 white oats, 55½@56c; No. 3 white oats, 53½@54½c; No. 2 yellow shelled corn, 96@97c.

TOBACCO MARKET

—Nov. 27, 1920.

Tobacco market was quiet thruout the week occasioned by a joyous Thanksgiving. In some localities growers and others held Tobacco Fairs where entertainment was equal to that of many more widely advertised occasions, as approximately 25,000 people attended during the several days the fair was held.

Hundreds of samples of tobacco and other products of the locality were shown by those competing for the many premiums awarded. The varied features of progress and entertainment attracted visitors from all walks of life who showed strong undercurrent of interest and anxiety as to the future valuations.

Growers are in no mood to accept unfair dealings in the matter of prices and have never been so unanimous in their determination to hold their tobacco unless they obtain a fair profit. General interest centers in the national meeting of growers which takes places at Washington, December 9th. Among other subjects will be the consideration of markets and methods of dealing with factories. Conferences will be held with members of Congress, Federal Trade Commission, the agricultural department, etc. With its great liberality and with universally humane and recognized purpose in its policies there can be little doubt of the good effect to be derived thru a clearer understanding of the improvement in the tobacco situation. It is to be hoped that soon all tobacco districts of the country will unite solidly into one body with equal power to act as a unit in the many important questions arising over this particular industry.

NEW YORK MILK MARKET

—Nov. 29, 1920.

Trade continued slow, but surplus gradually decreasing. Wholesale demand still very light. For the first time in many years the December price will be lower than in November; 3 percent milk in 200-mile zone will bring $3.18 per 100 lbs. to the shipper, a reduction of 47c; 3.6 percent milk is $3.42, and 4 per cent milk is $3.58. Receipts of milk and cream in 40-quart cans for the week ending November 27, 1920, were as follows:

Railroad.	Milk.	Cream.
Erie	40,583	1,479
Susquehanna	12,559	94
West Shore	13,525	1,610
Lackawanna	57,114	1,823
New York Central (long haul)	172,733	1,881
Ontario	45,816	1,715
Lehigh Valley	50,766	867
New Haven	6,750	65
Pennsylvania	12,310	406
Other sources	6,000	200
Totals	418,156	10,140

THE BRITISH APPLE MARKET

The American Agricultural Trade Commissioner at London reports the following range of prices for apples on the British markets for the week ending Nov. 23. At London: Yorks and Greenings brought 55s. ($9.56) per bbl., conversions being made according to the rate of exchange prevailing on Nov. 20 when a shilling was worth $0.173. Baldwins sold at 50s. ($8.69); Ben Davis, 46 to 52s. ($7.99 to $9.04); Kings, 50 to 55s ($8.69 to $9.56) per bbl. Northwestern box apples are arriving in bad condition, many being overripe. Kieffer pears brought from 42 to 44s. ($7.30 to $7.65 per bbl.

At Liverpool: Yorks ranged 55 to 59s. ($8.69 to $10.25) per bbl. Baldwins, 45 to 50s. ($7.82 to $8.69); Kings, 55 to 60s ($9.56 to $1.43); Albemarles, 65 to 68s ($11.29 to $11.82); Ben Davis, 48 to 59s ($8.34 to $10.25) per bbl.; Jonathans sold at 15 to 20s. ($2.61 to $3.82) per box. Wasty stock sold at 6 to 15s. ($1.04 to $2.61) per box.

At Manchester: Yorks ranged 46 to 58s ($7.99 to $10.08) per bbl.; Newtowns sold at 19s. ($3.30) per box.

At Glasgow: Yorks brought from 40 to 62s ($6.95 to $10.77) per bbl.; King David, Wagners and Wealthys, 18 to 20s. ($3.13 to $3.48) per box. Jonathans ranged from 20s. 6d. to 21s. 6d. ($3.56 to $3.74) per box.

The sale of all imported apples in England from Dec. 1, 1920, must be made thru brokers who have been registered by the Food Ministry, according to a cablegram received from the American Consul at London. Importers desiring to sell their own apples are entitled to be registered as brokers on application to the Ministry of Food.

INTERSTATE MILK PRICES

—Nov. 27, 1920

The Philadelphia milk will be two cents per quart less than November price.

RUST'S EGG PRODUCER

Makes Hens Lay Winter Eggs

Mix RUST'S EGG PRODUCER with their daily ration. Soon you have cackling red comb chickens laying more and more eggs each week.

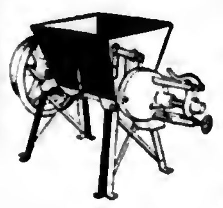
RUST'S EGG PRODUCER tones up the egg producing organs. Used by professional poultrymen for thirty years. If your dealer can't supply you, send us his name and 38c and we will send you postpaid 1-lb. trial package.

Beware of Roup

One ounce of prevention is equal to a pound of cure. RUST'S ROUP POWDER kept regularly in the drinking water of the fowls during the Fall and Winter months, will keep your flocks free from this dreaded disease.

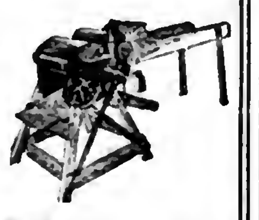
T.W. Wood & Sons
Richmond, Va.
Successors to
Wm. RUST & SON

Peerless Feed Mill



Double crusher roll, machine-cut plates. Grinds better quality feed with less power, grinds green ear corn, small grains and alfalfa. Also furnished with cast plates. Sizes 1½ to 20 H. P. Write for prices and catalog.

Peerless Fodder Shredder



If you have 3 H. P. engine you can run this 14-inch machine successfully. Will pay for itself in one year's use. Will not pulverize blades and tops. Sold on thirty days free trial. Write for price and catalog.

A. M. DELLINGER, Lancaster, Pa.

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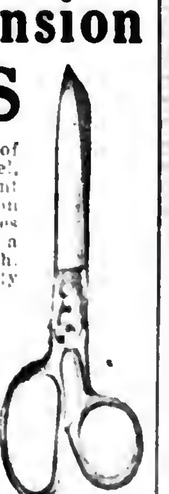


Self-Sharpening. Made of good quality cutlery steel, 8 inches long with patent adjustable spring tension bolt, preventing the blades from spreading and giving a clean cut the full length. Nickle silver finish, highly polished.

Sent prepaid for two subscriptions for the balance of this year and all of next, or to Jan. 1, 1922, at 75 cents each. Given with a single subscription and 35 cents additional.

Pennsylvania Farmer
261 S. Third Street, Phila, Pa.

8 Inches Long

OUR BUSINESS LETTER

Advantages of Pooling

Leaders of farmers' organizations several times during the last few months have issued statements to their members which suggests more gradual marketing of their products. Wool, wheat and cotton are particular examples. It was the belief of these farm leaders that supply and demand conditions did not justify the radical declines which values had undergone and that higher prices would follow later on when these conditions were again dominating factors in the making of prices.

Thus far those who have followed such adivce have been the losers, and it remains to be seen whether their action will profit them individully or not. These counsels have been nullified by the drastic collapse known as "deflation," as the result of which the general price level has been carried down so low that when the recovery comes, as come it certainly will, it may not lift prices up to the point that would have been obtainable by the individual farmer early in the season. Also costs of carrying charges, risk and shrinkage in the case of some crops must be considered.

Nevertheless the advice to hold back and not force the market has had merit. It was necessarily given in a wholesale way. If a considerably larger percentage of farmers had endeavored to sell upon the market, weak as it was, the decline would have been even more precipitate and prices would be lower than those now prevailing.

This instance illustrates one of the great advantages of handling farm products by the pooling ystem. Each farmer obtains practically the same price for the same grade of product, no matter when he sells so that there is no impulse to crowd the market. By pooling also the grower is no longer concerned in the day to day changes in prices up or down. For him the market is stabilized. Possibly we may find after all that the pooling system provides the only means of stabilization.

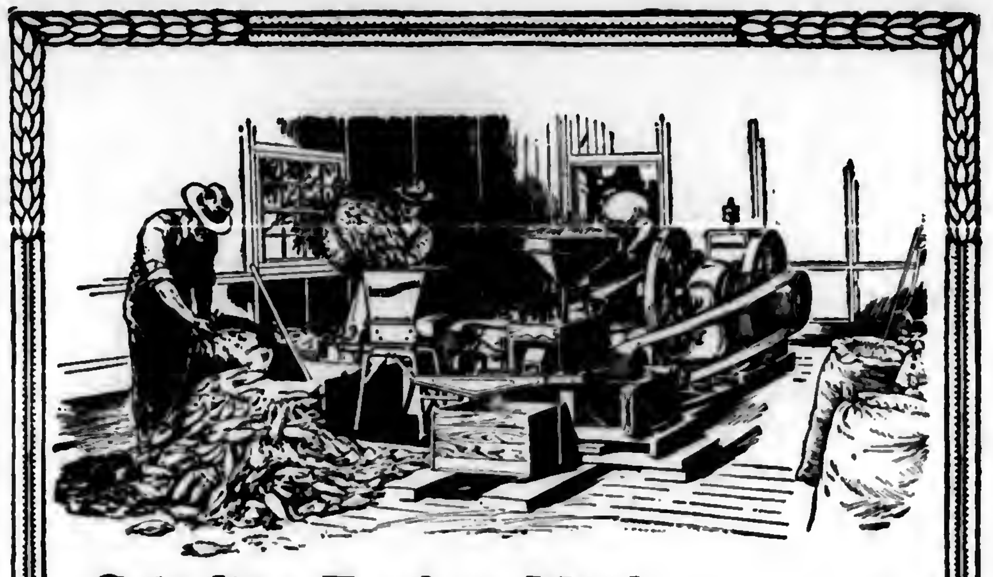
Ten-cent Hogs Materialize

The past week hog markets received the first heavy runs of the winter season and the average price dropped below the $10 mark at practically all the big packing centers. The top at Chicago on the low day was $10 compared with a top of $18.25 and an average of $17.16 at the high point in September. Theoretically, this is deflation enough and it seems likely values will not go much below this level at any time during the winter, although a few still lower spots may develop from time to time. The ratio of corn to hog prices is still favorable to the hog feeder. The adavnce in freight rates and other elements in the cost of grain marketing makes the live stock route more attractive than before.

Receipts at 69 markets during the first 10 months of the year are 4.6 per cent less than in the same period of 1919.

No Improvement in Wool Markets

Wool markets continue to reflect the stagnant condition in the textile industry. Markets in all the leading countries continue to sag, in some cases reaching the level of pre-war days. Boston reports offers of Lincoln fleeces from Argentina at 11½ cents and 40-44s at 15 to 18c. South African wools are quoted as low as 70-75c for clean combing wools, landed basis.



Grinding Feed or Meal
Shelling Corn
Cleaning Grain
Sawing Wood—

THESE fall and winter jobs are waiting for **International Kerosene Engines** everywhere. And the feed grinder, stone burr meal and flour mill, fanning mill, and buzz saw represent only a few of the many farm tasks handled successfully by International engines.

Save labor, save time, save money, make a profit for yourself during odd days by grinding feed, meal or flour for your neighbors—with International kerosene power.

Your nearby International dealer sells International engines—1½ 3, 6 and 10 h. p. Bear this in mind the next time you are in town.

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One Man Saws 40 Cords a Day!

Newly Invented Clutch Starts and Stops Saw-Engine runs on coal
Strictly a One Man Outfit
Used by the U. S. Navy and in Government Schools
Cuts Up Branches
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Plenty of Fuel for Yourself and to Sell at High Prices!

Beat the Coal Shortage with the Ottawa Log Saw and make big money. Cut your entire winter's fuel supply quick, then make big profits sawing wood for others and selling wood in nearby towns. Provides cheapest and most plentiful fuel at a cost of about 1½c a cord. Do the work of 10 to 15 able-bodied men at one-tenth the cost with the

OTTAWA LOG SAW

Cuts Down Trees—Saws Logs by Power

Pulls Over 4 H. P. Makes 310 saw cuts a minute. Direct gear drives saw—no chains to tighten; no keys; no set screws. 4-cycle Frost Proof Engine with counter balanced crank shaft. Oscillating Magneto Ignition, no batteries ever needed, and Automatic Governor with Speed Regulator. Uses little fuel. Easy to operate. As easily moved by one man as wheelbarrow. When not sawing, engine runs pumps, feed grinders, etc.

Easy to Move from Cut to Cut

30 Days Trial. Every Ottawa shipped on 30 days trial. Must fulfill 10-year Ottawa Guarantee. For nearly 30 years we have been selling direct from factory to users, saving them thousands of dollars. Now over 10,000 satisfied users all over the world.

Cash or Easy Terms. Get our payment plans of purchase and find out how easy it is to own an OTTAWA Log Saw. It will soon pay for itself. Any man with logs to cut can not afford to be without this Log Saw, and he can soon own it under our wonderful selling plan.

Special Offer Write at once for Special Offer and Low Direct Factory Price; also Free Book, fully illustrated, showing how thousands of Ottawa users have paid for their log saws in a few weeks. Don't delay. It costs nothing to investigate. Just send your name and address on a postal card for complete information and special introductory offer.

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Leaves No Stump

Warranted to Give Satisfaction
Gombault's Caustic Balsam

Has Imitators But No Competitors

A Safe, Speedy, Positive Remedy for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs and Lameness from Spavin, Ringbone and other bony tumors. Cures skin diseases or Parasites, Thrush, Diptheria. Removes Bunches from Horses or Cattle.

As a Human Liniment and Antiseptic for external use it is invaluable.

Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price $1.75 per bottle. Sold by druggists, or sent by parcel post, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address
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$500 SAVED
On 100 PIGS by FEEDING
ACME PIG MEAL
Equal to Milk Protein 28½%
A COMPLETE RATION
FOR PIGS AND BROOD SOWS
Fed to fattening hogs for half the cost of Tankage.
$1.65 worth of Acme Pig Meal feeds a pig until five months of age.

500-lb. lots ....$4.10 per 100
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THICK, SWOLLEN GLANDS
that make a horse Wheeze, Roar, have Thick Wind or Choke-down, can be reduced with
ABSORBINE
also other Bunches or Swellings. No blister, no hair gone, and horse kept at work. Economical—only a few drops required at an application. $2.50 per bottle delivered. Book 3 R free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Cysts, Wens, Painful, Swollen Veins and Ulcers. $1.25 a bottle at dealers or delivered. Book "Evidence" free.
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BARRED ROCK and R. I. RED **Pullets**
Nice big healthy pullets. March hatch, $2.25; April, $1.95; May, $1.75. GOOD MIXED PULLETS, mostly from mixed flocks of thorobred hens. March-April, $1.75; April-May, $1.60.
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Sicilian Buttercups
Farm range, prize winning Buttercups. Investigate this wonderful variety. Write for circular.
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BARRON WHITE LEGHORNS. My egg a day line is America's heaviest flock average layers. Now booking baby chick orders for Spring delivery from pedigreed males of 265-282 records. Circular free.
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S. C. W. LEGHORN BABY CHICKS, for 1921 delivery. Prices low, quality of the very best layers in America. Small deposit assures you of the chicks when you want them.
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Selby Service Satisfies Ship us your produce, poultry and eggs. Penna Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
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Tiffany's Superior Chicks for 1921 W. andottes Rocks Reds and Leghorns. Pekin, Rouen and Runner Ducklings.
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WANTED Poultry, calves, fancy eggs and nuts for the holidays. WM. H. COHEN & CO., 232 Washington St., New York City.

Barred Rocks (pullet mating) Excellent layers Buttercup, Ancona cockerels and pullets. Range raised Prices right J. K. Cadwallader, Wellsville, Pa.

PURE BRED GEESE. Ducks, Turkeys, Chickens Guineas, Dogs, Hares. Prices reasonable. Catalog free. H. H. FREED, Telford, Pa.

LIVE STOCK

SAUSAGE, HEAD CHEESE AND SCRAPPLE

By W. H. Tomhave

The making of sausage is an old custom which originated in Europe, but has developed on a high plane with the progress of our meat packing industry. There is a large number of different kinds of sausage manufactured in the packing houses of this country. We shall not attempt to discuss these in detail, but will give the recipes for a few that seem best suited to farm conditions.

The object in making sausages is to utilize the trimmings and otherwise waste portions that cannot be cured or used as fresh meat. The making of sausage need not be confined to the use of these waste portions or scraps but any part of the carcass may be used. The best quality of sausage is made when the choice portions of the carcass are used.

Pork Sausage

Pork Sausage is probably more universally made in the farm home than any other kind. There are various ways of making it, but the method outlined here is easy and simple. It is made from the lean meat trimmings and such cuts as the shoulder, loin, or ham added, if it is desired in considerable amount. The meat should be cut into small pieces, about four inches in length, so that they can be put thru a sausage grinder. Pork alone may be used, but frequently from fifteen to twenty per cent of beef is added. The meat is ground thru the coarse plate of the grinder and spread on a table or bench and the seasoning added. The amount and kind of seasoning to use will depend upon the individual taste. Salt and pepper are the common ingredients used. For each hundred pounds of meat, add two pounds of salt and six ounces of pepper; five to ten ounces of sage may be added if this flavor is desired. If the sausage is dry, a small amount of water may be added. The seasoning is spread over the meat, after which it is put thru the fine plate of the grinder. The sausage may be made into paddies, put in casings, or stored in bulk. If made into paddies, it is fried, put into stone jars and stored in a cool place. If it can be frozen, it may be stored in bulk or paddies.

Bologna Sausages

This kind of sausage may be made on the farm but its manufacture is confined largely to manufacturing establishments and local butchers. Bologna sausage originated in southern Europe and is named after a small village in southern Italy where it was first made. It is made largely from beef and from such carcasses as are too thin to cut for the trade. Carcasses of bulls and cows are used to a large extent. It provides a means of disposing of meat that is nutritious but otherwise unpalatable, if not made into sausage. A mixture of eight to ten parts of beef to one of fat pork is commonly used. The meat is put thru a grinder, after which it is spread on a table and seasoned. The amount of seasoning to use will vary, but a common allowance is one pound of salt, six ounces of pepper and two ounces of coriander for every fifty pounds of meat. A small amount of water is added if the mixture is dry. The meat is again put thru the grinder, after which it may be worked by hand to mix thoroughly the fat and lean. It is then stuffed in beef casings and smoked for three or four hours with a light smoke of hard wood. The sausages are then cooked in water at about 175 degrees F. for a period of twenty to thirty minutes, after which they are ready to be used.

Head Cheese

Head cheese is made from the head, feet, tongue and heart of the hog. Thoroly clean the head and feet by removing the toes from the feet and the eyes and brains from the head. Also, thoroly clean the nasal chambers of the head. Cut the head into suitable pieces so that it can be cooked. Cook the meat until it is easily separated from the bones. Save the soup to be poured over the meat when finally cooked. The meat is finely chopped and again put on to cook, using enough of the liqour to cover the meat. Add salt, pepper and sage to suit the taste, and allow to cook for about twenty minutes. Pour the mixture into shallow pans or crocks and allow it to set and cool.

Scrapple

Scrapple is made from pork, the head and feet being generally used, but any part of the carcass may be used. The meat should be cooked until it comes from the bones. Chop the meat finely and put back into the vessel in which it was cooked. Add a small amount of salt seasoning to suit the taste. Add a mixture of corn meal, nine parts and buckwheat flour one part. This should be added slowly and kept stirred until enough has been added to make a thick mash. The mixture is poured into a shallow pan and allowed to cool, after which it is sliced and fried.

NEW YORK WOOL SALES

Sheep breeders of Otsego County, N. Y., met in November for the annual session of the Otsego County Sheep Breeders' Association. Aside from routine business, the work of the wool sales committee commanded special attention. Arrangements were announced for loading the wool of members at convenient stations and for shipping the combined season's clip to Syracuse where the federation storehouse is located. There it will be sorted and graded by an expert employed by the State Sheep Breeders' Federation. The wool will then be sold in parcels and proceeds, less actual cost in handling, sent as returns to the producer. That this conservative method of farm organizations in marketing their produce is meeting approval in strictly financial circles, is attested by the following comment taken from the official organ of the National City Bank of New York: "It is doubtless good policy for the cotton growers to market their products slowly this season, on account of the depressed state of the cotton goods market. The wool growers have been forced to follow the same policy in order to prevent the market from being glutted."

MEAT MEAL
Manufactured From
Beef, Blood and Bone
A properly proportioned
Concentrated Ration
Better Than Tankage
For Poultry and Hogs
GUARANTEED ANALYSIS
Protein 65%
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Bone Phosphate of Lime ...16½%
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THE FOOD TO FEED TO FORCE THE EARLY BROILER
INCREASE YOUR EGG YIELD AND ADD WEIGHT TO YOUR HOGS
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HOGS Make 'em Grow Fast
Thousands of users of Semi-Solid Buttermilk report quicker gains, earlier marketing, bigger profits. It pays to fatten hogs fast for market and this fresh, creamery buttermilk, with the water taken out, does it!
Semi-Solid Buttermilk
"Best Hog and Poultry Feed on Earth"
Contains no sulphuric acid or other injurious preservatives. Keeps fresh indefinitely.
Be sure to get the genuine Semi-Solid Buttermilk. Order a barrel (average weight 600 pounds). One barrel makes 1000 gallons of pure, rich, buttermilk feed. ORDER TODAY.
Consolidated Products Co.
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DIGESTER TANKAGE FOR HOGS
Write for prices, feeding directions, etc.
IDEAL RENDERING CO.
NORTH WALES, PA.
IDEAL MEAT SCRAPS TRADE MARK

Bone Spavin Even established cases yield to Fleming's Spavin and Ringbone Paste, or money back. $2.00 a bottle postpaid. Send for FREE Vest-Pocket Veterinary Adviser. Describes Spavins and 300 other horse and cattle ailments.
FLEMING BROTHERS, 253 Union Stock Yards, Chicago

SHETLAND COLTS—We have six colts for sale. Weanlings (about 6 mos. old), yearlings and one two years old. Send for list. Farmers' prices.
CHARMARIE FARMS, Box 1632, Philadelphia, Pa.

LARGE YEARLING RAMBOUILLET Rams. Shropshire ram lambs, 100 to 120 lbs., by 250 lb. imported ram. Ewes bred. Big type O. I. C. boars and sows. Recorded and express paid
HERBERT C. BEARDSLEY. Montour Falls, N. Y.

REG. BERKSHIRE PIGS., both sexes, for sale. Large type. Also one Guernsey bull, 3 years old. Papers free with all.
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COON, FOX and RABBIT HOUNDS on trial. Photos, testimonials, prices, circular.
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HAMPSHIRE HOGS. Limited wintering capacity. Offering some choice individuals, 2 to 6 mos. Herd boars and gilts. F. W. Fogelsanger, Chambersburg, Pa.

Chester Whites and HAMPSHIRE SHEEP. Write your wants. We can please you. TWIN BROOK FARM. Newville, Pa.

Swine

CHESTER WHITES For Sale. Service boars and young pigs, all ages.
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REG. O. I. C'S, all ages. Open and bred gilts at prices to move them.
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ROSECOYD FARM'S Durocs of Quality. Well kept, well bred, well fed.
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FOR SALE—Reg. Big Type Poland China Spring boars and Gilts, one herd boar, 2 years old, choice fall pigs R. H. LYLE, Cadiz, Ohio.

REG. O. I. C. pigs all ages, selected stock, attractive prices.
BRUBAKER BROS., Star R., Cocolamus, Pa.

REG. BIG TYPE POLAND CHINA pigs, $15.00 each, 1st of November delivery.
C. E. SECHLER. MARKLETON, PA.

BEST BREEDS, chickens, ducks, geese, turkeys, guineas, hares, dogs. Stock for sale. Catalog free.
H. A. SOUDER. Box P, Sellersville, Pa.

Facts in BLACK & WHITE

Tests Prove the Value of Purebred Holstein Sire

Reports of tests, covering a period since 1909 and published by the Iowa Agricultural Experiment Station, state that the average of records made by first generation heifers by a purebred Holstein Sire show an increase of 71 per cent milk and 42 per cent fat at an average age of three and one-half years over the record of their scrub dams at an average age of six years. It has long been a proven fact that the introduction of a purebred Holstein bull to a herd of common cows will substantially increase production and profits.

Read in our booklets just why there's big money in the big Black-and-White Cattle.
THE HOLSTEIN-FRIESIAN ASSOCIATION
218 Hudson Street
Brattleboro, Vermont

Swine

Special Reduction For 30 Days—20 per cent Off on Reg. Big Type Spotted Poland China hogs, brood sows with litters by their sides. Spring gilts and boars, fine yearling boar. Fine lot of Fall pigs, 22 from two sows, prize-winners at the Ohio State Fair.
Remember the blood of that grand old champion, O. and K.'s Pride 30th, is in this herd. Send in your order at once and get the best for less than anywhere else, with this reduction off.
H. C. KYNER. Shippensburg, Pa. R. No. 4.

O.I.C. Swine We have some bargains at present in young pigs and service boars. Will close them out very cheaply before going into winter quarters.
ELM GROVE STOCK FARM, Cortland, N. Y.

REGISTERED DUROC-JERSEY PIGS
$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs.
C. W. Ellis, Jr., Maple Lawn Farm, Cortland, N. Y.

REGISTERED O. I. C.'S
All ages. Bargains in bred gilts and boars of all ages. We are overstocked and the price is right.
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25% Reduction on all Durocs
to close out quickly. No stock excepted. Excellent opportunity to improve your herd, at right prices. State wants quickly
H. ED. BARCLAY. R. D. No. 4. Somerset, Pa.

REG. BIG TYPE old-fashioned spotted Poland Chinas of quality. Am offering a few choice sow pigs, bred from a half brother to a $21,000 boar. Both sons of noted sire, King Lear, a 1000-lb. boar. Write for prices.
D. CLYDE THOMPSON, Chambersburg, Pa., R No. 10.

CRYSTAL SPRING STOCK FARM, Seelyville, Pa. Offer 20 registered Berkshire gilts of April farrow weighing 185 to 200 pounds, by Symboleer's Masterpiece, the wonder boar and son of our American Champion, Symboleer's Junior. 2 boars suitable to head the best herds anywhere.

VIEWMONT FARM
Mainville, Pa., offers choice O. I. C. 150 to 175-lb. April and May pigs from Schoolmaster boar and Callaway Edd sows. Reg. free. Shipped C. O. D.

Large Type Reg. Berkshires of all ages for sale. Select a breeder from a large litter. Pay when you see stock. No cash in advance.
DAVID WIANT. HUNTINGTON MILLS, PA.

REGISTERED DUROCS—Fall pigs both sexes for sale. Also a few mature animals including a good boar. Good breeding. Right type.
Northumberland Co. Duroc-Jersey Breeders' Assn., I. M. Fry, Corresponding Sec'y, Sunbury, Pa.

FOWLER'S PURE BRED HAMPSHIRES
Will please you.
Best and largest herd in East.
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REG. DUROCS Large size, heavy bone, best blood lines, prices reduced for fall. Satisfaction guaranteed.
JOHN W. COX & SON. New Wilmington, Pa.

Reg. Berskshires with size and quality; long bodies, good in back and legs. Fall pigs and bred sows.
NEARBY STOCK FARM, POTTSGROVE, PA.

Big Type Poland China. Sired by Chief Lad, a grandson of Mountain Giant, the $5,000 hog. Papers fur. Satisfaction guaranteed I. S. Funston, Amberson, Pa.

NELSON'S BERKSHIRES—Fall pigs, $10 ea. Some spring gilts and boars, $35 to $50 each.
W. O. NELSON, JR., PORTER, DELAWARE

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, Center Valley, Pa.

HAMPSHIRE SWINE
LOCUST LAWN FARM, Bird-in-Hand, Box 2, Pa.

MILK-FED BERKSHIRE PIGS, $10 up. Reg. and guaranteed
Barnes Purebred Stock Farm. Grove City, Pa.

DUROC BOARS ready for service. Feb. gilts that will make something fine. Fall pigs, either sex.
B. H. SAGER. BASIL, OHIO

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Thin Horses.—My horses are out of condition, hide-bound and thin. Will you kindly give me formula for condition powder that can be given to the horses in their feed. G. B., Selingsgrove, Pa. A good and not very expensive condition powder is made by mixing equal parts powdered gentian, powdered red cinchona, ginger, fenugreek, sulphate of iron, sulphur and salt, together. Give each horse a tablespoonful at dose in ground feed 2 or 3 times a day. Kindly understand in addition to giving condition powders to thin live stock you should perhaps increase their feed, or possibly make a complete change in their food for a time, until the animal commences to thrive and lay on flesh. The most intelligent feeder of live stock has learned, that animals tire of the same ration and after a time require a change, which, if made, the stock improves. Groom your thin horses twice daily and keep them in a clean, well ventilated stable.

Bunch on Pastern.—I have a mare that has a growth on the hind pastern about the size of a hen egg. This bunch has the appearance of a wart and is now growing. Last June when first noticed it was very small. J. F. P., Millstone, Md. Veterinarians consider it best practice to surgically remove such bunches then the wound heals rapidly, but if caustics are used it makes a nasty sore, and this treatment is not always successful. Secure the services of a veterinarian and have him cut off bunch.

Sick Shoats.—I have been having trouble with some of my shoats and a few have died. The first symptom I notice is loss of flesh and they continue to grow thinner and weaker until they die. The first three weeks, pigs have fairly good appetite, and until within few weeks of the time they die, they eat fairly well. I have lost two, and the third one is about dead. In an adjoining lot the shoats are all thrifty. I also have nine pigs two weeks old, some of them are dumpish, but their mother is a fine thrifty sow. S. C. H., Detour, Md. A careful examination should have been made of each shoat after death. Had this been done you might have found large numbers of bowel parasites. The intestines of swine is a common abode for parasites. Prevention is far more satisfactory than treatment of badly infested hogs, but by keeping the quarters clean, gathering up the droppings, placing them where fresh lime can be applied. Besides, the pen and yard should be kept clean. If you are certain that the shoat is very wormy, give santonin and areca nut and follow this with full dose of castor oil. I suggest that you either make or have a thorough examination made of the next one that dies—then write me what you find

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There's a difference between feeding cows so they can exist and feeding them so they can produce milk.

Uncle Ab says: Some folks may think they're getting a lot out of life by just piling up a big bank account, but some day they're likely to learn different.

Special Bull Offer
Buy one in the next 30 days and we will prepay express charges and guarantee safe delivery.
You can take your choice of ten priced at from—
$50 to $150
These are young, registered Holstein bulls of good individuality, and they are sired by bulls that are out of 30 and 40 pound dams and have from eight to twenty year record daughters.
The dams of these calves are now making creditable year records.
Write for Pedigrees and Prices
WINTERTHUR FARMS
WINTERTHUR *Federal Accredited Herd* DELAWARE

GUERNSEYS
How can your community obtain pure bred Guernseys? This question is answered by one who knows. Let us tell you what he says.
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QUALITY ECONOMY QUANTITY

200 HOLSTEINS Guaranteed HEALTHY
Carload of any age in
Registered or Grades
Calves, yearlings, 2 year olds, cows or bulls.
60 Day Retest Guaranteed
High grade heifer calves $20 each
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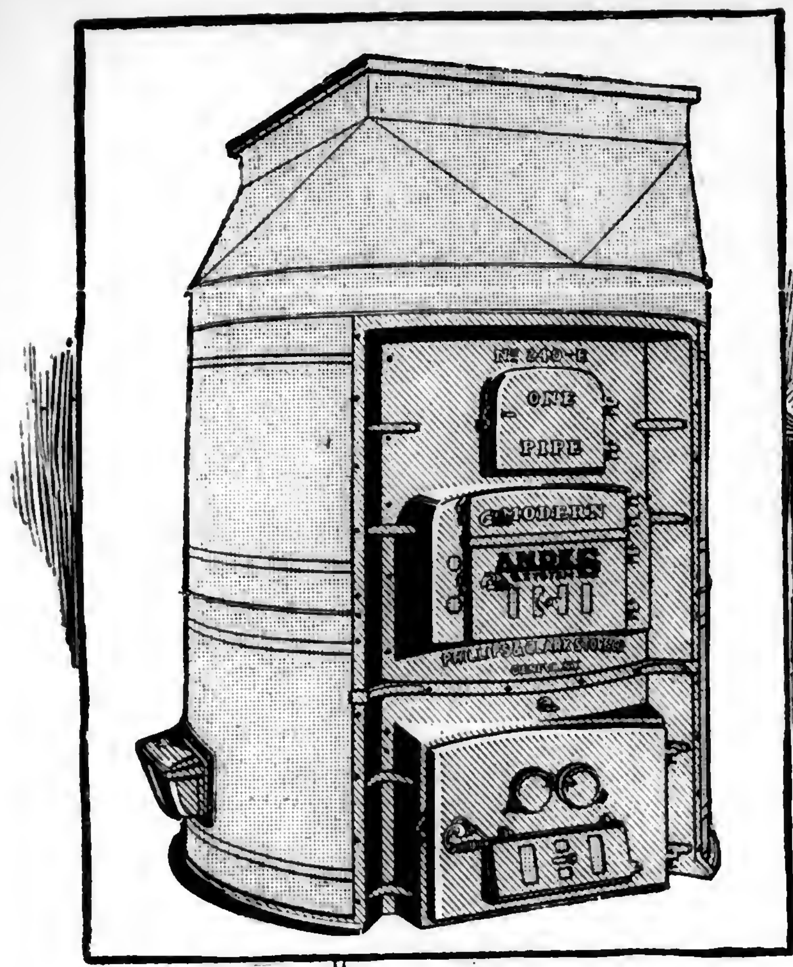

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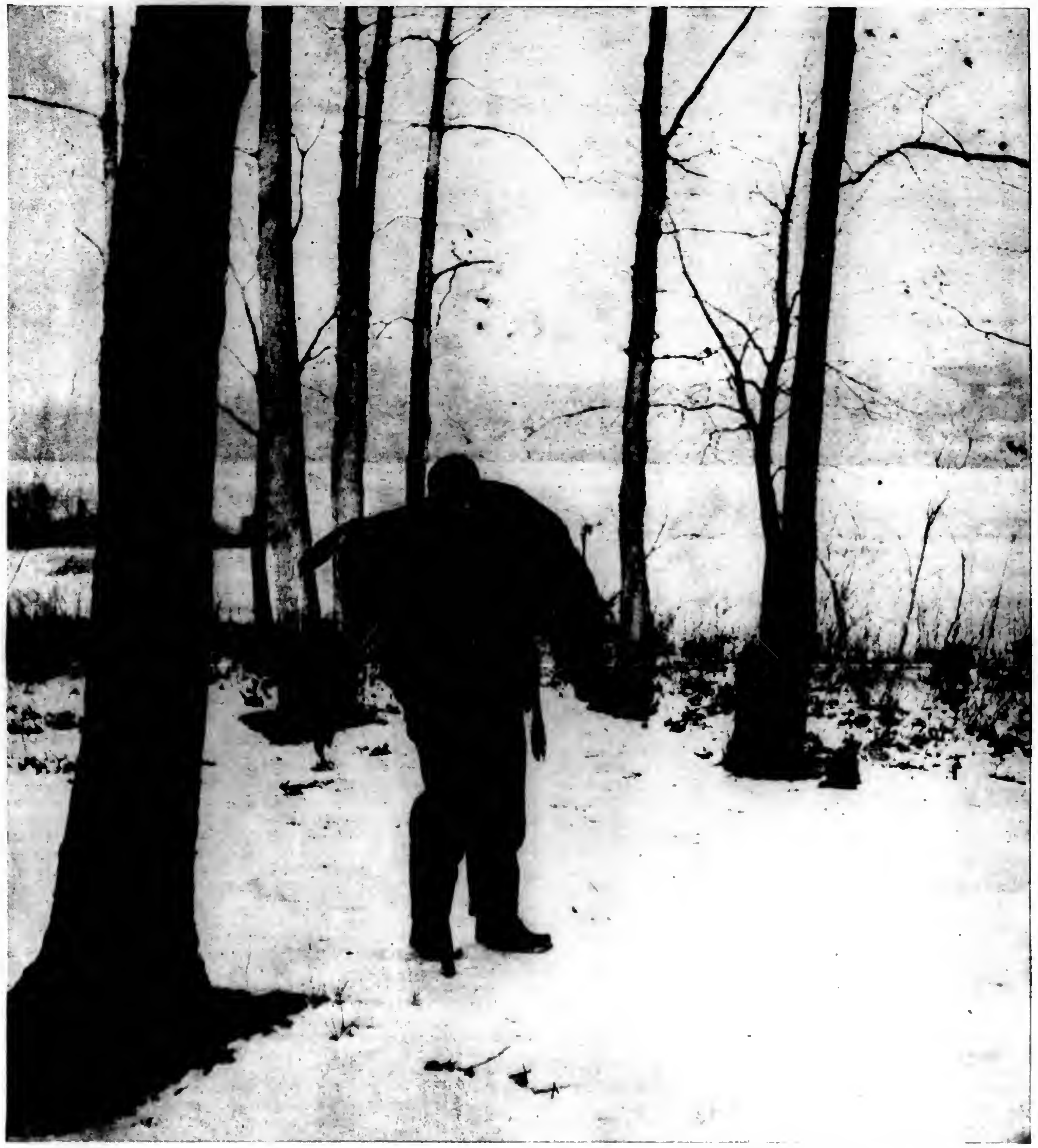

Getting Most From Manures

Best Methods of Hauling and Applying Manures to Utilize its Plant Foods

E. L. WORTHERN

CORNELL AGRICULTURE COLLEGE

(Concluded From Last Week)

Keeping Down the Loss From Manure

The most practical method to follow in controlling the loss from manure will vary somewhat with the individual farm conditions. While the details should be worked out for the individual farm, certain essentials must enter into each method.

In the first place, a satisfactory method for conserving the liquid manure must be established. For the majority of farms, as already stated, this consists of the combination of water-tight floor and the liberal use of bedding. If stored, the manure should be placed in a covered shed or a concrete pit. A covered manure storage with concrete floor and sides is best. When stored in this way the manure should either be compacted or kept thoroly wet. A good scheme is to make the manure shed accessible to farm animals so they will keep the manure well tramped.

On the great majority of farms the manure can be hauled directly to the field and spread. The minimum loss in the manure will follow this procedure, and in addition the labor cost is kept down as the manure need be handled only once There may be short periods when it is not practicable to haul the manure directly to the field, but when feasible it is a practice to be commended. A small storage to hold the manure for short periods would prove a good investment on most farms.

The practice of distributing the manure in small piles over the field is as objectionable as leaving it in the barn lot. There is a maximum loss due to fermentation and leaching from the small piles and there is an excess of plant food carried into the soil directly under the piles. A large pile in the field is less objectionable than a lot of small ones, but immediate spreading should apply at either method. The use of preservatives such as gypsum, acid phosphate and rock phosphate, will aid in keeping down the loss from manure. The most economical preservative is one that contains phosphoric acid as a reinforcing material.

Reinforcing Manure With Phosphorus

While manure can be considered a complete fertilizer, it most certainly is not a well balanced one from the standpoint of the average crop. It is chiefly deficient in the plant food phosphorus. It is primarily rich in nitrogen and potassium. For most profitable returns, it is absolutely essential that manure be either reinforced with some carrier of phosphorus, or that a phosphatic fertilizer be applied to the crop manured.

The Ohio Experiment Station has found that the value of a ton of manure is more than doubled when it is reinforced with acid phosphate or rock phosphate. The profit that can be reasonably expected from the investment in fifty pounds of acid phosphate or one hundred pounds of rock phosphate per ton of manure, would be just about the same as that given by the manure itself. If one hundred tons of manure will increase the yield to the extent of $300, then an investment in a phosphatic fertilizer to use with the manure can be counted on to give an additional $300 profit.

Many farmers make the mistake of applying a mixed fertilizer to a crop that is being manured. This mistake would not be made if the composition of manure were fully appreciated. It will be remembered that a ton of average mixed manure contains 10 pounds of nitrogen equivalent to 12 pounds of ammonia, five pounds of phosphoric acid and ten pounds of potash. A six-ton application of manure would furnish 72 pounds of ammonia, and 60 pounds of potash to the acre. It would take a ton and a half of the ordinary mixed fertilizer to furnish an equivalent amount of potash and nearly two tons to furnish a like amount of ammonia. When over 70 pounds of ammonia and 60 pounds of potash are being furnished in manure, little benefit would be expected from an application of [illegible] to six pounds of a mixed fertilizer. Under such conditions the fertilizer investments should be restricted to acid phosphate, [illegible] ordinary [illegible]

It has been definitely determined that a light application of manure will give greater returns to the ton than a heavy one. At the Pennsylvania Experiment Station manure has been applied at the rate of six, eight and ten tons every other year for over 30 years, in a four-year rotation of corn, oats, wheat and a mixed seeding of clover and timothy. Based on normal value of crops the increased yields showed the following value of a ton of manure.

When applied at the rate of 6 tons per acre, $3.22
When applied at the rate of 8 tons per acre, $2.56
When applied at the rate of 10 tons per acre, $2.29

There is naturally a lower limit in the rate at which manure can be applied practically. Five or six tons probably represents the minimum rate to be considered. Where upwards of eight tons of manure are available to the acre each rotation, it is better to manure two of the crops rather than to put all the manure on a single crop.

Method of Application

For best results manure should be distributed evenly. This can be most successfully accomplished by the use of the modern manure spreader. The material should be broadcasted for all field crops. For cultivated crops like corn, potatoes and tobacco, the manure should be broadcasted before plowing and plowed in the soil. For fall seeded grain and for grass, it can most advantageously be applied as a top dressing to the growing crop.

What Crops Should be Manured?

Manure, when intelligently used, will be beneficial for any field crop on most any kind of a soil. It is the best "cure-all" we have for soil ills. Unfortunately few farmers have enough, and while it is true that some crops respond better to an application of manure than others, there is no one crop which should always receive the manure application. The details for the most profitable utilization of manure must necessarily be worked out for the individual farm. However, the following brief discussion of the manuring of our most common field crops should furnish helpful information to those desiring to get the most from farm manure.

Manuring for Corn

Corn requires a large amount of nitrogen. Its profitable production requires a soil well supplied with this plant food or its economical application thru manure or some other form of farm-produced organic matter. Consequently it is the crop in the ordinary rotation most in need of manure. Unless a heavy sod is being turned under for corn, an application of manure is essential for the production of a good crop on ordinary Pennsylvania soil.

For corn, manure should be broadcasted and plowed into the soil. Best results will be secured if the manure is applied at least several weeks before the corn crop is planted. The manure should either be reinforced with acid or rock phosphate or acid phosphate or steamed bone meal applied directly as a fertilizer for the crop.

Manuring Wheat and Oats

Like corn, wheat is a good crop to manure. The need of manure for this crop can be determined by the growth of straw. When a sufficient growth of straw is obtained for a maximum yield without manure, then this material would better be applied for some other crop. Manure applied under these conditions would tend to cause lodging. However, farm land is seldom so well supplied with nitrogen but that good results will follow the application of manure for wheat.

For this crop the manure shoud be applied as a top dressing in the fall or early winter. This method of application will conserve the maximum amount of plant food, to a certain extent it may [illegible] winter killing and when applied in this way most favorable conditions are furnished for a good stand of clover and timothy.

The oat crop is less in need of manure than corn and wheat. When following manured corn, this crop will secure sufficient nitrogen from the residual effect of the manure applied for the corn, and additional manure is liable to cause serious lodging.

In the common four-year rotation of corn, oats, wheat and a mixed seeding of clover and timothy, two light applications of manure, one for corn and the other for wheat could be considered ideal.

Manuring Grass

When timothy is left on the land the second year, it offers an excellent place for manure. With this longer rotation, it is probably better to top dress the timothy with manure the year preceeding corn, than to manure the corn crop directly. The practice of leaving land in timothy for several years should be discouraged from the standpoint of soil improvement. Where this practice is followed, soil depletion will follow unless the timothy is top dressed with manure or with a fertilizer containing considerable commercial nitrogen.

Manuring Clover and Alfalfa

As a rule it is not a good practice to apply manure directly for clover or alfalfa. If well inoculated, these legumes have the power of securing an abundance of nitrogen from the atmosphere. When supplied with available nitrogen, in the form of manure or fertilizer, nodule development is retarded and less nitrogen is extracted from the atmosphere. Particularly in case of alfalfa, manure is objectionable because it benefits weeds and grass more than it benefits the crop itself. As a result, manured alfalfa has a harder time competing with these other plants

In case of very poor soil an application of manure may aid in securing a satisfactory stand, but with most soils the correcting of acidity by liming, and the liberal application of phosphorus, will assure success with these legumes provided the soil or seed is inoculated. With red clover seeded in wheat, the manure can be applied as a top dressing for wheat and the residual effect will be beneficial to the clover. Under these conditions the wheat will secure the available nitrogen from the manure and that becoming available for the clover should not materially lessen the amount of atmospheric nitrogen fixed by this legume.

Manure For Potatoes

Fresh manure—particularly that from horses—should not be applied in rows but broadcast for potatoes. Such manure favors the development of the disease known as potato scab. A light application of well-rotted manure may safely be made for potatoes when the soil is known to be deficient in nitrogen. There is always some danger of furnishing an excess of nitrogen, causing too rank growth of tops at the expense of tuber development. In the long run the safest plan is to apply manure for the preceding crop in the rotation. Then the potato crop will get the residual effect of the manure. Too, the manure will have largely decomposed and become thoroly incorporated with the soil, furnishing the maximum effect in loosening up the surface soil for the potato crop.

Manure For Orchard and Gardens

Orchard and garden crops respond to the application of manure. The vegetable garden should receive an application of from 15 to 20 tons of manure annually, not only as a source of plant food, but as a means of furnishing organic matter. When thus manured, the physical condition of garden soils should be favorable for maximum production. However, it is a mistake to depend on manure alone. Mineral plant food, particularly acid phosphate, should be used in addition to manure. Some commercial potash, and with some crops a little nitrate of soda, too, will give additional benefit.

Soils and Fertilizers

Conducted by Dr. J. G. Lipman

Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

SOYBEANS ON AMERICAN FARMS

Within the last ten years soybeans have earned deserved recognition as an important farm crop. It is believed that soybeans were first grown in the United States by Mr. James Neilson, a Trustee of the New Jersey State Agricultural College. In 1870 he accompanied Dr. George H. Cook, the first director of the New Jersey Experiment Station, to Europe and brought back some soybean seed from the collection of Dr. Haberland at the Vienna Botanic Gardens. Soybean seed from other sources was gradually brought into the United States and the crop first won recognition for the purpose of soil improvement. It was also grown extensively as a forage crop in the last decade of the Nineteenth Century. Among others, the New Jersey and Massachusetts Experiment Stations contributed much valuable information on the need of inoculating soybeans for successful production. They also contributed analysis on the chemical composition of soybeans and brought out the fact that this crop is very high in protein and, therefore, valuable both for feeding purposes and for soil improvement.

Since the beginning of the present century the growing of soybeans for seed has become quite important. The southern states particularly have recognized the value of the soybeans as a farm crop. The high content of oil in soybeans—amounting to as much as 20 per cent—gives it decided value as a source of table oil. In fact, in the southern states where cottonseed is crushed, soybeans are used in a similar manner. For instance, over a large section of northeastern North Carolina soybeans are grown on practically every farm. In 1915 about 200,000 bushels of soybeans produced in this section were crushed for oil and meal. The owners of the crushers have since then imported considerable quantities of soybeans from Manchuria and have used it as a source both of oil and meal. In this connection, it is interesting to note that farmers in this territory who have been growing beans for several years have increased the yields of corn by one-half and other crops in the same proportion. At the same time, the yields of soybeans have also increased and are still increasing.

From the standpoint of soil fertility, soybeans are one of the most interesting of the crops introduced into the United States from abroad. They are suitable for growing on land that is too heavy for cowpeas. The bacteria that form nodules on the roots of soybeans are distinct from those that form nodules on cowpeas or garden peas. They seem to possess greater power for fixing the nitrogen of the air than is possessed by other legume bacteria. This may account for the fact that both soybean forage and soybean seed contain much more nitrogen than is contained in equivalent amounts of cowpea forage or seed. In fact, soybean hay compares very favorably with alfalfa hay from the standpoint of protein content. Soybean seed will contain as much as six and occasionally seven per cent of nitrogen. It is evident, therefore, that, because of the ability of soybeans to grow on heavy soils not suitable for cowpeas, and because of their ability to accumulate relatively large quantities of nitrogen from the air, they lend themselves readily to soil improvement. Even where the crop is grown for seed the residues of nitrogen left in the soil are of distinct value in furthering the growth of the crops that follow.

In the middle west soybeans have already established themselves as a desirable substitute for oats in the well-known five-year rotation. In the southern states soybeans are grown in rotations with corn and cotton. In both regions they are becoming a distinct aid in furthering the live stock industry. The high content of fat and protein in the soybean seed makes the crop particularly valuable for pork production. With the improvement in the methods of harvesting, the introduction of soybean pickers now used extensively in the south and better methods of curing soybeans for forage purposes, the rapid expansion of the area under soybeans can be easily accounted for. Nevertheless, it is quite apparent that the popularity of the crop will from now on grow very fast. For one thing, there will be improvement made in the type of soybeans by breeding and selection. Standard varieties like Mammoth Yellow, good as they are, could, no doubt, be improved by such methods. There will be a differentiation of varieties for oil and the selection and breeding of soybean varieties for that specific purpose just as there will be selection and improvement of certain types of soybeans for forage purposes. In the course of time the consumption of soybeans as human food will increase and a large number of soybean products will be developed and gradually introduced into the dietaries of the population in the United States. It is evident that the market for soybeans is practically unlimited in the south because it can be used to advantage by the crushers and the oil extracted. There is no reason, however, why soybeans could not be grown as an oil crop also in the northern states. It is estimated that a ton of soybeans, containing 33 1-3 bushels, will yield about 30 gallons of oil weighing 240 pounds and about 1620 pounds of meal. The meal is somewhat higher in protein than cottonseed meal and is much safer for feeding livestock than is cottonseed meal. At this time, when farm methods in many section of the United States call for readjustment on account of the changing industrial and economic conditions, the possibilities of soybeans for replacing crops no longer profitable and for allowing the maintenance of soil fertility at a lower cost, should receive careful study.—J. G. Lipman.

Suggestions for Planting a Country Home to Make It Homey

Applying Lime in Fall

I have just been reading an article in the Pennsylvania Farmer about liming the soil in the fall. I was thinking it would be a hard proposition to run a lime-spreader on plowed ground, and if I harrowed it down it would be hard to break up in the spring.

Now suppose I have some ground I can't plow in the fall, for lack of help; why couldn't I lime it now and plow it in the spring? Would you consider this practical or not?—W. W., Lakewood, Pa.

In the case of very sour soils lime may be applied before plowing and again on the plowed land. This is unusual. The common practice is to spread lime on the plowed ground and work it into the surface. This is done because of the fact that the roots of the young plants are confined to the surface soil and that they need to be protected from soil acids and injurious products developed in acid soils early in their growth. As you point out, it is hard to run a lime spreader over plowed ground. However, when the ground is disked after plowing in the spring, the lime could be broadcasted and harrowed in without difficulty. You will observe that the objection to liming the land in the fall or winter and then plowing it in in the spring would lie in the fact that the lime would be buried five or six inches and would not be able to sweeten the surface soil, where it is most needed. Some times it is practicable to plow the land late in the fall and to broadcast the lime after the ground is frozen. On flat or very gently rolling ground the lime could often be spread on the snow without danger of losing much of it by surface washing.—J. G. Lipman.

STORING POTATOES

Most of the potato growers of Pennsylvania grow their own seed and those who buy new seed each year usually do so in the fall. For these reasons the storage problem is very important. Good seed potatoes are often very much weakened in their vitality by storing them under improper conditions. These conditions are temperature, moisture and ventilation, say specialists at the Pennsylvania State College school of agriculture.

Experiments show that potatoes keep best when stored at a temperature ranging between 35 and 40 degrees Fahrenheit. The moisture present in the air should be sufficient to prevent wilting, but not such as to all condensation on the tubers. The ventilation should be sufficient to allow a frequent change of the air thruout the pile.

These conditions may be met in "pits" dug in the ground, in bins built in cellars, or in especially constructed storage houses. In no case should the potatoes be piled to a depth of over three feet for the reason that deep piles prevent proper ventilation.

If pits are used it is important that they be protected from freezing and that they be provided with a stack for ventilation. The stack should extend as far down as the center of the pile. If cellars are used the potatoes keep best when placed in racks or small bins with ventilation between [illegible] equipped with furnaces are not usually favorable for storage of potatoes unless the storage part is well isolated from the furnace room. The temperatures are usually too high and the air too dry. Windows allow for ventilation if regulated according to the outside conditions.

Careful attention to these details will prevent much of the loss from rot and bring the tubers thru the winter in good condition for seed purposes.

SHREDDING CORN STOVER

In November and the early part of December many farmers store corn stover for winter feeding and bedding. There are several rather serious objections to storing and feeding the whole stalks. They are difficult to handle, are not eaten to much extent, are slow and poor absorbers of liquid manure when used as bedding and make a poor bed for animals.

Shredding corn stover overcomes all of these difficulties and is therefore considered a good practice. But there is one difficulty that has prevented the practice becoming very general and that is shredded material molds and spoils.

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OUR JOB is to serve our readers. Whenever you are puzzled, write to us and we will help you if we can.
—The Editors.

Christmas Seals

WE HOPE our readers will buy liberally of the Christmas Seals which are being offered in almost every locality by Red Cross Societies and other organizations. The funds derived from the sale of these stamps are applied by the Society for the Prevention of Tuberculosis to stamping out the great white plague. No work is more deserving of generous public support than this and it is hoped that everyone will contribute by purchasing Christmas Seals for use upon letters, Christmas packages, etc.

States Rights

IT IS ALMOST amusing to hear certain "interests" revive the old question of states' rights, and decry the tendency of the American people to enact national laws for the control and regulation of some lines of business. The reactionary type of mind is forever looking backward and longing for a return of conditions as they existed before progress brought every section of the country close to every other section, and knit the welfare of one neighborhood with the welfare of every other neighborhood. Of course, there are certain questions which are confined within state boundaries, but these are local in character and have little or no interest for people living elsewhere.

We are gradually adopting the practice of enacting laws to standardize business and social practices thru the constitutional right to regulate interstate commerce. There is scarcely any line of business which is not directly or indirectly affected by interstate trade and travel and it is highly essential that an approach to uniformity be effected. The appeal to prejudice which certain interests are making to preserve the rights of the states to regulate their own affairs is only legitimate when pertaining to themselves; but, like the old doctrine of personal liberty, it cannot stand when the welfare of others is involved. The future development of American business and social progress will depend upon more rather than less nationalization and standardization.

The Labor Outlook

PRESENT indications are that the scarcity and high cost of farm labor will not be the serious problem next year that it has been for the past four or five years. Thousands are now looking for work where a year ago jobs were more numerous than men. Not only has the peak of high prices of commodities been passed, but it is altogether likely that unemployment will soon make it possible to get farm labor at prices which farmers can afford to pay. It must not be inferred that farmers are in favor of low wages, for it is well understood that farm returns are dependant to a great extent upon the ability of laborers to buy, but it is only consistent to hold that wages should bear some relation to prices which farmers receive for their products.

In "the good old days" it was roughly figured that a day's wage for farm work was about right when it equaled the price of a bushel of wheat. Gradually there has been a widening of the difference until at present it requires the price of two or three bushels of wheat to pay for a day's labor of 8 hours, instead of 10 to 12 hours. Of course, a day's work today is more productive than it was a generation ago because of the adoption of better farm practice and improved machinery; but allowing for this, and also for greater prices, the market returns for farm produce will not cover other costs and pay present standard wages. In other words, the cost of a day's labor and the price of a bushel of wheat must come closer together than they are at present.

What Do You Suggest?

WE WILL SOON be starting the new volume of Pennsylvania Farmer. In order to help us fulfill our ambition to make a still better paper we would like to receive from you, before New Year's Day, a good, chatty letter telling us how you think we can improve Pennsylvania Farmer. We would like nothing better than to meet each of you personally and have you tell us just what you think of the paper and in what way, in your opinion, it could be made more interesting and valuable. But of course we cannot do that, so the next best thing is to have you write it and we urge you with all earnestness to perform this little act of helpfulness. We expect to get some very helpful suggestions from this appeal. Now don't disappoint us. Our people have never disappointed us yet when we asked a favor. These letters will not be for publication, altho we reserve the right to publish any we may see fit. They will not be paid for, but we will send a five-dollar bill to the writer of the one from which we get the best inspiration and most helpful suggestions.

Feed The Children

THE WAR IS OVER, but the pain and misery caused by the war, like a running sore, seem to be eating deeper and deeper in some parts of the world. The future of some nations, and in just that same degree the future of the world civilization, is menaced. In Central and Eastern Europe 3,500,000 children are starving. We have Herbert Hoover's word for this as well as that of the Red Cross, the Knights of Columbus, the Jewish Welfare Board the Y. M. C. A., the Y. W. C. A. and the American Society of Friends. These organizations have banded themselves into one large organization called the European Relief Council, with Franklin K. Lane, former Secretary of the Interior, as treasurer, and will undertake the work of feeding this enormous number of starving children on and after January 1, when the work of the American Relief Committee ceases. The American Relief Committee is Mr. Hoover's organization which first functioned in Belgium, then northern France and finally the whole of Europe. Under existing arrangements and lack of funds this body will turn its work over to the newer organization, which Mr. Hoover, thru a prominent national periodical, is backing.

The very fact that Mr. Hoover's organization during its lifetime, spent over two billion dollars at an administration cost of less than one-half of one per cent guarantees that the new organization which is also directed by Mr. Hoover will be efficient. The sum necessary according to Mr. Hoover is $33,000,000, which will be divided as follows: $23,000,000 for actual feeding to be administered by the European Relief Comitee and $10,000,000 to be administered by the American Red Cross for medical purposes. We do not want our readers to feel that this is a three-meal-a-day proposition, because it is not. The children are given one meal a day, which is eaten at one of the 7000 feeding stations in the afflicted countries. This precaution is taken in order that no adults may receive food intended for the children needing it. The worst trouble is in the cities and it cannot be alleviated until the harvests next August. Mr. Hoover in his characteristic way has insisted that the governments of the countries in which this service is being rendered shall furnish such service as they can toward this maintenance of child life, or in other words shall provide all administration, all transportation, all labor and all warehousing. Thus every dollar of the fund that Mr. Hoover asks goes almost in its entirety for food, and it only takes one American dollar to feed a central or an eastern European child for one month, one meal a day.

If, in this Christmas season, you feel the spirit of Christ who said: "Suffer little children to come unto Me," make out a check for whatever amount you can afford and mail it to The European Relief Council, Franklin K. Lane, treasurer, 42 Broadway, New York city. We think this is a fine time and a fine way to give some of the children of these districts a chance for life. It does not make any difference to what country they belong, they are children.

Who'll Pay The Taxes?

IN VIEW of all the spoken and written propaganda now appearing for a reduction of taxes, one is led to wonder who is going to chip in and raise the four billion dollars or more which must be raised annually from now on. The heads of big industrial and financial institutions are crying loudly for "relief from destructive taxes" and all sorts of reasons are given as argument to prove the absolute necessity for such relief. Up to a short time ago the stock argument was that it was impossible to lower the high cost of living until taxes were lowered. But prices did slump. Now we are told that production will continue to fall off and unemployment increase until taxes are lowered. No definite plan for a revision of the tax law has yet been proposed but the thought in every one's mind seems to be, Let George pay it.

There is little doubt but what a new scheme of taxation for peace time must be adopted as soon as possible. The present law as passed hurriedly under stress of necessity and for war-time conditions and, it cannot be contended that it will fit present and future needs; but one principle must be kept in mind. Each must pay tax according to his possessions and his ability to pay. Any atempt to relieve wealth and income while putting additional burdens upon productive energy and human labor must be nipped in the bud. We have a tremendous debt to pay, the interest of which will equal our one-time revenues and no class can hope to escape its fair and just share. The great majority—the common people—must needs keep a watchful eye upon Congress when this question is before it and exert a greater influence than can the smaller but more powerful group which will try to wriggle out of the tax gatherer's net.

Our Washington Letter

Senators and Congressman, especially those from the agricultural states, have returned to Washington with a well defined conviction that emergency remedial legislation for the relief of the farmers should be enacted at the earliest possible moment. Never before in the history of the nation, it is asserted, has the attention of Congress been so centered upon the needs of agriculture as at the present time. The representatives of several large farmer organizations have already presented their demands which it is believed Congress will not ignore. It is also true that not in a long time has the farmer had more active or influential friends in both branches of Congress than at the present time. These Senators and Representatives are largely from the Middle West.

* * *

Senator Capper, of Kansas, is deeply impressed with the extremely critical situation in the Middle West, where "there is a vague, ugly feeling among farmers over the violet fluctuations in prices of farm products which they feel is not entirely due to the law of supply and demand. Senator Capper would like to see an immediate embargo placed on wheat. The next best thing in his opinion, would be a tariff on wheat and other grain just as soon as a bill could be enacted

A move will be made to put a tariff on wheat, but there is a danger that it will be taken up in the general tariff bill which will require much time to prepare and enact, thereby postponing action on wheat so badly needed in the present emergency. The Kansas Senator stands for a protective tariff on all farm products—wheat, corn, hogs and cattle—which now compete in our home markets with similar products coming from Canada, Argentina, Denmark and other countries.

* * *

A bill to prohibit gambling in the grain and cotton exchanges on future deliveries of farm products, will be introduced by Senator Capper at an early date. "I am not advocating doing away with the exchanges, and their legitimate activities; what I am after is to stop gambling in farm products," he says. "Immediately after the opening last July of the Chicago Grain Exchange, which had been closed during the war, prices of farm products began to fluctuate violently with bears in control, forcing the markets downward and undoubtedly exerting a great influence in depressing prices."

It is proposed by Senator Capper to restrict trading in farm products to those who are dealing in a legitimate way. His bill will put a tax on all contracts except those made by producers or dealers engaged in actual selling and milling of wheat, and will prohibit all transactions that are not bonefide.

* * *

The Capper-Volstead farmers' collective bargaining bill is in excellent shape to get thru Congress during the short session, according to Senator Capper. This bill has already passed the House and is now on the calendar for action in the Senate. The bill which passed the House put the regulation and control of the co-operative organizations under the Department of Agriculture, but the Senate bill places these organizations under the Federal Trade Commission. This, however, is regarded as a minor difference, and it is thought that an agreement will be reached without retarding the passage of the bill.

* * *

The French-Capper truth in fabrics bill is not in as favorable position as the other measures, but Senator Capper says that President-elect Harding is in favor of both the bill to legalize farmers' co-operative marketing associations and the truth in fabrics legislation.

* * *

A real effort toward working out a law to establish a nation-wide system of marketing which will benefit alike the farmer, stock raiser and consumer will be made in this Congress, says Senator Cummins of Iowa, who will take a leading part in this movement.

* * *

All the farmer organizations are giving much attention to rural credits and in this they have the active support of several Senators and Congressmen. One of the plans proposed is the amendment of the Federal Farm Loan act to give the farmers better credit facilities. Another proposal is the establishment of a system of warehouses whereby the receipts of products in storage made negotiable.

* * *

The McFadden Rural Credit bill, which was introduced in the House last spring and has attracted much comment, both favorable and adverse, has made considerable progress, and its friends are confident of its success. But they are willing to accept any revisions that may be effective in providing the farmers the necessary credits. Dr. Jacob H. Hollander, of Johns Hopkins University, has informed Mr. McFadden that he will be glad to help in perfecting a rural credit bill, with the understanding that the subject is to be approached without commitment to any particular plan and with the sole purpose of attaining the wisest solution. Dr. Hollander was the associate staff director of the advisory committee on policies and platform of the Republican National Committee, and is a well known economist. The backers of the McFadden bill will ask the House Committee on Banking and Currency, of which Representative Louis T. McFadden is chairman, for judicial hearings on the bill. It is probable that Dr. Hollander will be employed as monetary advisor of the committee during the hearings.

* * *

Senators from the Middle West insist that the Federal Reserve Board should meet the present situation by adopting a more flexible policy for discounting farm paper. Senator Capper says the Kansas farmers cannot borrow as much as [illegible] cents a bushel on wheat. The banks have gone to the limit of their reserves and there is no criticism of their methods. It is suggested that Congress at once meet the crisis which now confronts the farmers by enacting a law requiring the Federal Reserve Board to make such extension of farm credits as will be necessary to relieve the situation. Senator Johnson of South Dakota, has sent President Wilson a telegram in which he described the extremely serious conditions prevailing in the Northwest, and urging immediate financial relief for the farmers and live stock producers.

* * *

A question of considerable importance which will come before Congress at an early date is that of removing the tax exemptions from future issues of all securities. Certain interests, including the Farm Mortgage Bankers' Association, are advocating the removal of the tax exemption from farm loan bonds. "It is enough to make the ordinary friend of agriculture tremble when he contemplates what may happen to the farm loan act in Congress, with the provisions of the law and its purposes and benefits that have been derived under it, little understood by many members of that distinguished body," says a man who is in close touch with the subject. "I cannot escape a feeling that those who are charged with responsibility for the administration of the law and those entrusted with the management of the farm loan system land banks have failed utterly to comprehend the necessity for supplying the public with full information as to its interests in the farm loan system.

Organized labor is occupying much of the limelight just now. The leaders are preparing to concentrate their efforts upon two things—exclusion of immigration for at least one year, and opposition to the open shop. The labor people are not only backed by the Bureau of Immigration in their demand for the exclusion of immigration, but Chairman Albert Johnseon of the House Commitee on Immigration, is quoted as saying that "if a bill is not passed by Congress before March 4, it will be necessary to suspend immigration until formal action can be taken by the bureau." "Unless the present rush of immigration is checked," says Representative Johnson, "there is every indication that the fiscal year 1921 will record a total immigration more than twice as great as in any year heretofore." It is shown by official emigration figures that 600,000 persons have left Italy within the past year, at least one-third having come to the United States.

HARRISBURG LETTER

Help for the "Small Farmer."—While there was a great deal said about encroachment of the Federal Government upon state's rights and relief from the burden of Federal taxation at the Conference of the Governors held here a few days ago the subject which figured most in the discussions and in the conversations of the two score governors and governors-elect was how the men who raise the food supply are going to be held. Governors of purely agricultural states declared the situation "tragic," while others from states where production of food received an added impetus in war days said the conditions were distressing and what surprised them all was the unanimity with which the executives of manufacturing states joined with them. While the Conference of the Governors is little more than a forum its discussions received national attention and the resolutions ordered sent to the governors for study in drafting their messages to Legislatures meeting this winter were in reality intended for Congress. All agreed the enactment of legislation for financial relief of farmers was essential, paramount in fact. Two suggestions were made which will apply to many farmers in Pennsylvania as well as those of Michigan, Iowa and Oklahoma. One is that the federal reserve act be amended so that farm loans shall be given the same standing as commercial paper and farmers financed for their crops be given a year, while the other was some protection against cheap forcing food along the same lines as protection against cheap manufactured products. The former idea received most consideration and as Governor William C. Sproul set forth if the burden of taxation be lessened the States will be able to care for their people and if the government expenses are cut down there will be more money to aid the farmer. The financing of the "small farmer," the backbone of many a community, was the big idea and in this state it applies with equal force to the fruit grower, the potato raiser and the men who raise millions of bushels of wheat.

Bearing the Burden.—Another significant thing about the speeches was that the governors thought the limit of Federal and State taxation had been reached. Governor William C. Sproul said incomes were bearing about all they could stand and while intimating taxes upon manufacturing capital and coal and natural resources were possible said it was the desire of the state not to impose new burdens upon the people or operate to increase prices or check on business development. "Surely the land, that one great carrier of taxation, which is always visible, always tangible and has no opportunity to escape, is bearing all of the burden of taxation which it can stand and any increase will add to the economic difficulties of our people and to the troublesome problems of homes and housing," said the Governor.

Rasmussen's Idea.—Secretary of Agriculture Fred Rasmussen, speaking in Chicago at the same time as the Governor's Conference here voiced a similar idea. He held the farmer should not be compelled to absorb all of the losses on a falling market, while the profits on a rising market go to others. The secretary suggested the states take up questions of relief and give farmers more control of their own business. The secretary is opposed to the national federal law, which is about to be presented, holding that it would nullify state laws on the same subject which are operating to advantage.

Both to Discuss It.—Pennsylvania Congressmen here during the week declared they intended to bring up the matter of amendment or extension of the Federal Reserve act, while legislators, who were interested auditors of the addresses of the governors, said they were interested to hear what Governor Sproul would have to say on the subject in his message. It is recognized that public policy will give the question of aid for the farmer a far different slant than any for railroads or any other agency or branch of industry.

Foresters Meet Here.—Foresters of the United States are meeting here this week to discuss their problems and will likely endorse some of the plans which will operate for some uniform restrictions. The Pennsylvania situation, as outlined by Commissioner Gifford Pinchot, has won national attention and if the Pinchot plan is authorized by the next Legislature it may be followed in other states. It is generally recognized the forests are going to be a tremendous factor in educational appropriations in years to come.

Rural Chiefs Named.—Dr. Thomas E. Finegan's selection of four prominent and active county school superintendents to be assistant directors of rural education will give a big impetus to that line of educational activity as such men as Shaw, Bock, Russel and Armstrong have been identified with the movement to better country conditions. They have assumed their work and will begin tours of various counties in efforts to bring about adjustment of advantages, in which consolidation, new buildings, lengthening of the term and other subjects of vital interest to the rural taxpayer and his children.

Oleo Pays the State.—The manner in which the oleomargerine licenses are now adding to the state revenue is something impressive. In the year ending with November the revenue from this source was $585,000, something unprecedented and likely to be exceeded by tens of thousands in the next fiscal year.—Hamilton, Harrisburg.

NEW YORK LETTER

Canning Crop Growers Co-operate.—At the annual meeting of the State Federation of Farm Bureaus activities shown in behalf of the farmers were most comprehensive. The organization of canning crop growers was shown to have saved at least $250,000 to the 4000 members, who live in several counties. Based on the success of this work the federation was urged to do similar work in helping dairy and fruit farmers. A committee to do this will consist of a member representing each of the leading agricultural organizations of the state, and they will co-operate with the State College of Agriculture. War will be made also on fertilizer prices. Farmers are being charged war-time prices for these. These prices are supported by a schedule the Federal Government authorized. H. E. Babcock, secretary of the G. L. F. Exchange in an address said that the wheels of agricultural progress have stopped for the first time in seven years, and that only the determined efforts of every single farmer in the state will suffice to carry on the great work inaugurated for the betterment of farming. This means loyal individual support of the Farm Bureau, the Dairymen's League, and similar organizations.

Grange Head Urges Poll Tax.—National Grange Master S. J. Lowell is in the state promulgating the proposal of his body at its recent annual session that the soldiers' bonus be paid promptly by the issuing of a general poll tax. Every farm organization of the state will take action on this matter soon, that the new Legislature may be guided by such expression. As the soldiers' great service was of tremendous benefit to every person it is right, so says the Grange, that all share in a financial reward to them.

Milk Drops.—Following the dairymen's initiative in dropping the wholesale price of liquid milk one cent a quart the Bordens and other firms are passing on the drop. If they would sacrifice as freely as have the farmers the drop in retail prices would be two cents a quart, instead of merely passing along the cut that was made by the farmers.

Defection of Dairymen.—As might have been expected the 15,000 dairymen of this state who have been without a market for their milk since October 1 are beginning to accept offers made to them as individuals by the dealers. This milk is being dumped on the city markets to the detriment of the 63,000 dairymen who did not lose their market, and unless immediate and effective action is taken the latter will in consequence, suffer a big drop in the wholesale price of milk for the rest of the winter. The Dairymens' League is putting forth extra efforts to save the latter from happening, by pushing the plan of pooling the sales of all milk and reimbursing those who lost their market in October. Those farmers who refused to sign pooling contracts begin to see their mistake and that it would be better to sacrifice 20 cents per hundred pounds temporarily to protect those who lost their markets than it is to lose 50 cents or more on the wholesale price indefinitely, and to come back under the old rule of the milk dealers. Bordens and other firms are offering $3 per 100 lbs of 4 per cent milk to individual dairymen whose milk was left without a market.

Section of Natco Silo Wall. Note the steel reinforcing.

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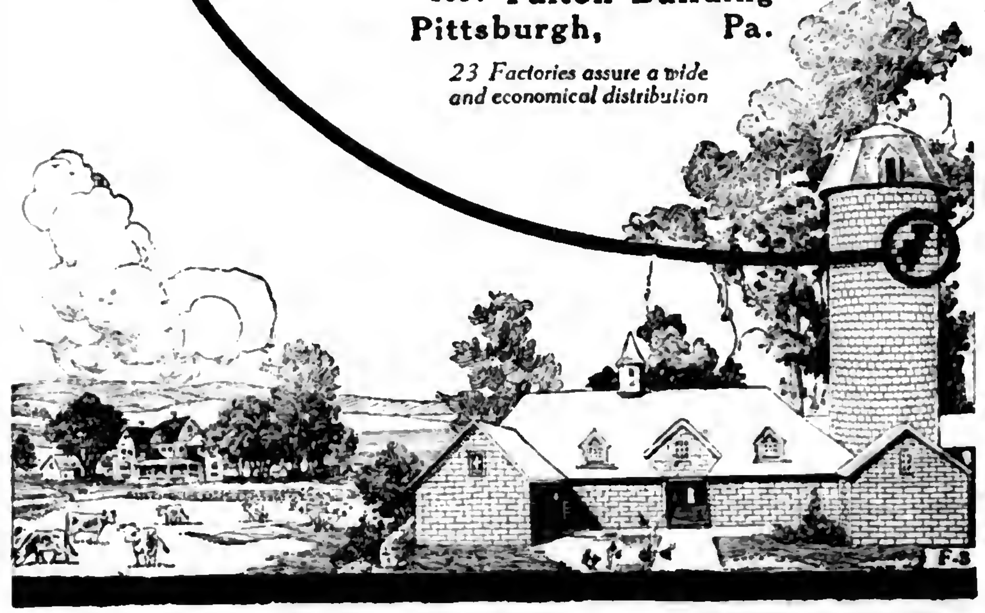

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NEW YORK STATE DAIRYMEN MEET

Watertown, N. Y., in Jefferson Co., is in the midst of a very prosperous dairying section. All across the state there are numerous cheese and butter factories and shipping stations. In many localities the Ayrshire cow has taken a prominent place and there are many herds and part herds of purebred cattle, not only Ayrshire but the various other dairy breeds.

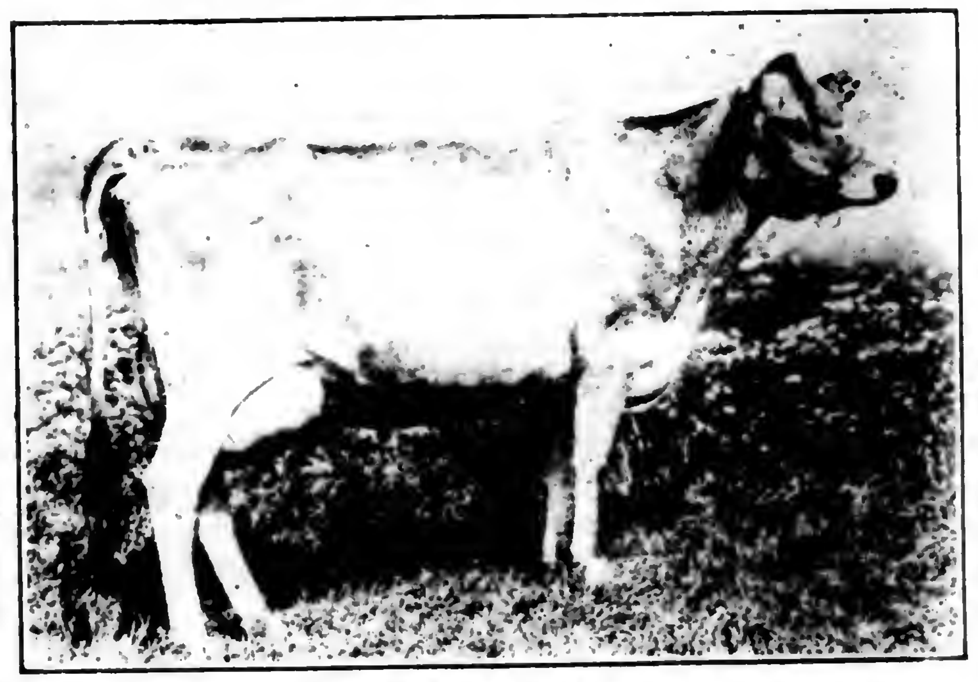
It was in this section that the State Dairymen held their association meeting this year. The usual welcome and response opened the proceedings. The mayor of the city of Watertown, where the convention was held, has at least an appreciation of the usefulness of the dairy farmer, and very likely he understands something of his difficulties. At any rate he hopes the dairymen will prosper and still furnish dairy products at a lower price.

Prof. Troy, the president of the association, in his response, went somewhat into detail in relation to the necessity of the larger use of butter, cheese and milk as well as the economy of so doing. Mr. Harris, of the city of Watertown, may have been a little sarcastic in his references to the "angelic attitude" of the farmers and distributors towards each other. He was forceful in his allusions to cheap politicians and a certain class of newspapers, bent on notoriety, who "investigate" and condemn without results and without knowledge. It is time to quit fighting. Ruin may come to the dairy industry because some one is engaged in a warfare of spite. Proper advancement can only be made thru organization, and farmers can handle this properly. They have done much during the history of our nation.

Mr. Hogue, commissioner of agriculture, thinks that an injustice was done in advancing rates and restricting loans by the Federal Reserve Bank just at the time of harvest. It has caused the loss of a great deal of food and much loss to farmers from lower prices. It will be necessary for farmers to work co-operatively, and finance and store goods upstate at harvest time to be slowly marketed as the demand comes for them.

Mr. Hogue then spoke briefly of the history of the department. It was organized in 1884 to prevent frauds in the handling of dairy products. At that time New York city used 500,000 quarts of milk a day, and it was determined that fully two-fifths of the so-called milk sold was water added to the milk. The law called at that time only for eight per cent of solids in the milk. At the present time the average test of fat in milk on the market is between 3.6 per cent and 3.7 per cent. It is also found that not a half of one per cent of the samples show even a trace of adulteration.

Mr. Flanders, who is still counsel for the department, and was with the department when first organized, 36 years ago, spoke of the high infant mortality when the milk was so badly adulterated. It was thought at that time by physicians and others in the city that it was farmers who were doing this. Investigations showed that the adulteration was in most cases after the milk left the farmers' hands. In one investigation in the City of Albany in 39 cases it was found that there was an addition of 120 per cent of water to the milk.



Countess Stella of Ashburn

Dr. Kiernan, of the Federal department, and D. W. McLaury, of the state, discussed bovine tuberculosis and the accredited herd plan. It was asserted that the disease is not particularly prevalent except in certain localities. It has increased somewhat in fifteen years in localities, but considerable is now being done to bring about its eradication. Two years ago there was difficulty in getting people interested in clearing up their herds. Now, the demands for tests are more rapid than can be met. In addition there is not enough money available to meet the necessary payments. It is desired to clean up herds by areas, as it can be done more cheaply and is much more efficient. Certain state indemnities are paid on individual animals condemned, but the state and Federal payments come only in the case of the whole herd being subjected to the test, and to retest with official credit.

Dean Mann, of the college, spoke of the apparent unfairness accorded farmers, both folowing the Civil War and at the present time. Deflation that seems to be too rapid now with attendant high interest rates is a large cause of dissatisfaction for it hits farmers hardest. It is asked by certain sections of the country that loans be made to buyers in foreign countries so that purchases may be made. There appears to be an overproduction and the solution is to find other markets than those we now have. Our greatest problem is to maintain our food supply, and a fairly profitable agriculture is a necessity for this.

A dairy farmer can hardly help feeling a resentment towards Mr. Nathans for his attitude towards the officers of the Dairymen's League. His explanations for the positions taken by the Nestles Company can in part be accepted for they undoubtedly made a business mistake in stocking up so heavily. The export demand is less than it once was, and no doubt this is partly due to the condition of foreign exchange, as he says. That the company is unwilling to assist dairymen is making a market for their products is not so easily justified as the speaker appears to wish it understood. He seized upon the fact that in one month the past summer the League under unfavorable conditions at one of its plants paid 65 cents a hundred under the price asked by the League and made it appear to have been at that loss all summer. His arguments against pooling were not convincing, especially as the purpose of pooling is to take care of those unable to pay full prices.—H. H.

INTER-STATE MILK PRODUCERS' ASSOCIATION

Philadelphia prices in effect Dec. 1, 1920. Subject to change whenever warranted by market conditions. When milk is not tested the price f. o. b. Philadelphia, is to be 8c per quart.

From these prices one cent per 46 quarts (or one cent per 100 pounds) is to be deducted by the buyer, which together with one cent per 46 quarts, contributed by the buyer, is to be turned over to the treasurer of the Advertising Campaign Committee for the purpose of carrying on a publicity campaign advertising the food value and greater consumption of dairy products. The usual commission from the members of the Inter-State Milk Producers' Association is to be deducted and returned to the Association as heretofore.

Test per cent.	Price per 100 lbs.	Price per quart
3.0	$3.28	7.1
3.1	3.32	7.2
3.2	3.36	7.3
3.3	3.40	7.4
3.4	3.44	7.5
3.5	3.48	7.6
3.6	3.52	7.65
3.7	3.56	7.7
3.8	3.60	7.8
3.9	3.64	7.9
4.0	3.68	8.0
4.1	3.72	8.1
4.2	3.76	8.2
4.3	3.80	8.3
4.4	3.84	8.35
4.5	3.88	8.4
4.6	3.92	8.5
4.7	3.96	8.6
4.8	4.00	8.7
4.9	4.04	8.8
5.0	4.08	8.9

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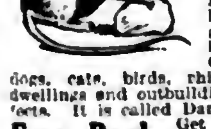

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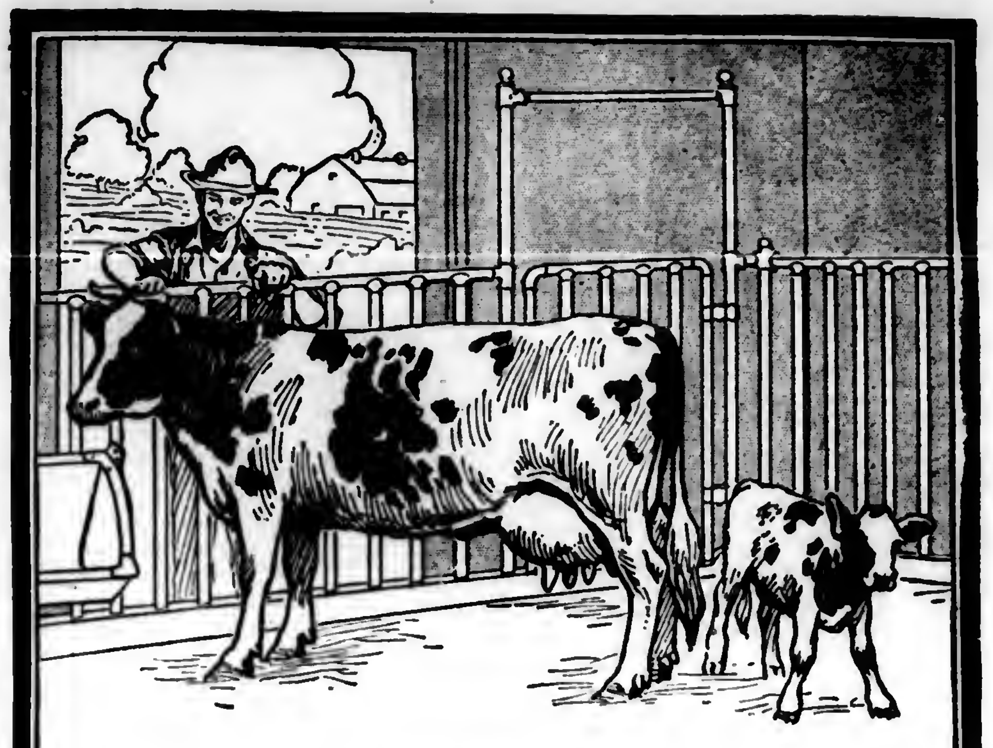

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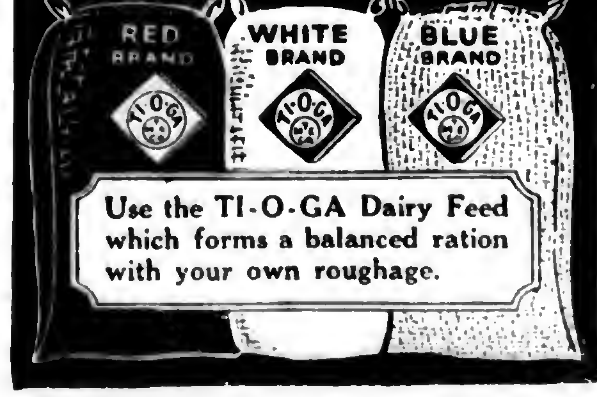

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HORTICULTURE

DOES FREEZING AFFECT LIME-SULPHUR?

By Dr. J. P. Stewart

Already we are beginning to receive inquiries from interested owners who have had lime-sulphur solution left over from last year, which has been more or less exposed to the frigid temperatures of the current winter, and who wish to know whether this material is still worth anything for spraying, and if so how this fact can be determined and its dilution properly accomplished.

This is one of the questions that the writer attempted to settle for himself, before publishing the first station bulletin on the preparation of lime-sulphur solutions, some twelve years ago. We made the test in two ways: In the first place, we put some of our laboratory-made solution into a big test-tube, and subjected it to the temperature developed by solid carbon-dioxid and ether. I don't recall just what this temperature is, but at any rate it is far colder than any natural temperatures that ever occur in this part of the world. It was so cold that it turned an especially dense solution to a buttery-appearing solid almost instantly, and changed its whole appearance so completely that I naturally supposed it was ruined of course. I took the tube back to the office, however, and set it up on a rack and left it. Imagine my surprise when I looked it over a little later and found it completely thawed out and returned to its original condition so perfectly that one would not have known it had ever been frozen.

James Hamm, Carbon Co., Pa., and His King Apples

In the other test, a sample of the same kind of lime-sulphur was set out of doors, with some protection against undue exposure to air changes, and was allowed to freeze and thaw with the weather, thruout an entire year. At the close of the year, this material also showed no evident change as a result of the freezing, with the possible exception of the fact that its density was somewhat less than it had been recorded at the beginning of the test. As a result of both of these trials, we concluded that freezing alone did not appreciably injure lime-sulphur solutions, and that after the removal of any crusts which may have formed as a result of exposure to the air, they could be tested with a lime-sulphur hydrometer and be diluted and used in accordance with their density, just as if they had never been frozen.

PROGRESS IN THE PREVENTION OF APPLE SCALD

By Dr. J. P. Stewart

The control or prevention of apple scald is a matter of prime importance to many commercial orchardists in Pennsylvania, and especially to those who are growing the York Imperial, or the Paragon or Blacktwig. All such growers will undoubtedly be interested in the recent report of progress issued by the U. S. Department of Agriculture on the control of this disease. This report tends to confirm their earlier findings to the effect that the trouble is largely due to a poisonous gas or gases given out in the respiration of the apples while in a semi-dormant condition, or in other words in cold storage.

The exact identity of the harmful gases has not yet been determined, but it has been found that the poison can be absorbed and the disease either prevented or reduced to negligible proportions, by wrapping the fruit with wrappers that have been treated with certain fats and oils, the identity of which is not stated. In barrel experiments in which only a part of the fruit was wrapped, the scald was also greatly reduced on the apples next to the ones that were wrapped. The ordinary commercial wrapping materials were of little or no value in decreasing the scald, and parafined wrappers were but little better.

Proper ventilation or stirring of the storage air had a marked effect in decreasing the amount of scald when the fruit was in ventilated packages. The stirring of the storage air was found to be more important than its renewal. Boxed apples exposed to a continuous current of air driven at the rate of 88 miles an hour were kept practically free from scald while similar apples left unfanned became badly scalded. Apples near the aisles or door were found to scald very much less than those not so situated. Well-colored red fruit surfaces proved practically immune to scald, and mature fruit in general was found to scald less than immature. Fruit just changing from green to yellow, however, usually scalded worse than those which was either all green or all yellow. Fruit delayed in getting into storage was especially likely to scald severely, unless it was well ventilated during the delay. This is in accord with the usual good orchard practice, in which the fruit is always left in open barrels whenever it has to stand for any appreciable length of time. It also justifies the current practice of removing the upper head from packed barrels of apples, when practicable, which have to be kept over the winter in common storage or in ordinary cellars.

CONTROLLING BROWN ROT

In 1919 the widespread and destructive character of this rot on peaches in Penna. has again emphasized the need of taking special steps to control it. Many growers lost one-third to three-quarters of their early peaches, and such losses when prices were good were most exasperating.

Unfortunately many peach growers have not yet come to regard brown rot as a controllable disease, but look upon it as if it were of the same nature as unfavorable weather conditions, whereas it is a definite fungus disease that can be greatly reduced by correct methods. Often fruit growers who spray carefully for apple scab will be utterly reckless about the equally serious brown rot on the peach crop. In other cases, men who understand the danger quite well "take a chance," and when the rot gets thoroly started they frantically try to control it, following the well-known policy of locking the stable door after the horse is stolen.

Brown rot control involves a whole season's operations and is not merely a disease that suddenly appears from nowhere when the fruit is ripening. The various measures which are necessary to keep it in check should be started in winter or early spring, and they are here outlined.

(1) When pruning knock off all mummied peaches. The fungus is still alive in these and will start into activity and spread the disease among the new crop in any moist, warm period.

(2) Prune so as to allow air and sunlight to penetrate into every part of the tree. Rot spores are readily killed by light, and openness allows quick drying after showers or dew.

(3) Plow late in fall, or early in spring before the blossoms open. The rotten fruits on the ground also retain the fungus in a living condition and spores from them can start the disease on the blossoms and young fruit. Besides killing many blossoms such early attacks establish the fungus all over the orchard for the season. Plowing prevents the early infection for that year.

(4) Thinning the peaches so that they do not touch each other will prevent much spreading of rot from contact, which is very common in clustered fruit.

(5) Keep down weeds. They provide shade and moisture, both of which are favorable to the fungus.

(6) Take off all rotten fruits at picking time. If left on the tree they are more likely to spread the rot, and besides they often kill back limbs and start cankers.

(7) Do not handle rotten and clean fruit at the same time. The brown dusty coat on the rotted surface is composed of millions of spores any one of which is capable of starting rot in a clean peach. The rotten peaches should not be allowed to lie around the packing house since the wind carries their spores to the clean fruit. Bury or cover them or take them away to some distance.

(8) Keep the fruit cool. Chilling or cooling as soon as picked, packing under shade, hauling under canvas cover, and shipping in cool cars, all help to reduce loss from rot. The fungus grows slowly at low temperatures and often cool conditions after picking will enable peaches to reach the consumer in good condition, when otherwise they would be hopelessly rotted.

(9) Spraying or dusting methods are intended to prevent fruit from becoming infected during the growing period. Such infection frequently takes place in curculio injuries and where curculio is present its control will always be an important factor in preventing rot.

Self-boiled lime sulphur, 8-8-50, is the standard spray material for brown rot.

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POULTRY

FEEDING FOR WINTER EGGS

It should first be understood that hens must be in good flesh if they are to become good winter layers.

Should you find, on examination, that the majority of your hens are not fat enough, feed a quantity of cracked corn or finely ground corn chop slightly moistened. Two weeks will suffice to put the hens in good flesh. A good way to determine the condition of a hen is to feel the breast bone. Not more than one-half inch of this bone should extend below the breast meat. Once a reserve of fat is established, the object should be to induce the hen to use this fat in the formation of egg yolks.

There is perhaps no quicker method of doing this than by the use of a good dry mash supplemented by limited amounts of fresh meat. One ounce of raw meat or green cut bone per hen, three times a week is recommended. This amount of raw meat may also be fed to well matured pullets when it is desired to hasten egg production. Great care should be taken not to give too much fresh meat as it will cause digestive troubles: the same is true of meat that is the least bit spoiled.

Economical Hauling of Fruit From a New Jersey Farm

It is customary to give the feeds in two forms: One whole or cracked grains and the other finely ground: the one called the scratch grain and the other the mash.

A ration should be simple and easily mixed. Following are a few suggestive mixtures.

Scratch Grains

100 lbs. cracked corn
100 lbs. wheat.
50 lbs. heavy oats or barley.
Or—
100 lbs. wheat
100 lbs. cracked corn.
Or—
100 lbs. cracked corn
100 lbs. wheat
100 lbs. oats or barley.

Mash

100 lbs. wheat bran
100 lbs. shorts
100 lbs. ground oats
100 lbs. fine corn chop or meal
100 lbs. beef scraps.
Or
100 lbs. wheat bran
50 lbs. shorts
25 lbs. meat scraps
All the sour milk available.
Or—
100 lbs. wheat bran
100 lbs. shorts
40 lbs. meat scraps
Or—
100 lbs. wheat bran
100 lbs. fine corn crop
100 lbs. ground oats
100 lbs. shorts
100 lbs. meat srcaps.

In extremely cold weather all the whole shelled corn the hens can eat should be supplied just before they go to roost at night.

The laying mash should be kept before the flock all the time. The principal point to be kept in mind is to see that the hens do not lose weight. If they begin to fall off in flesh, increase the amount of grain. If the majority of the flock show a tendency to deposit a lump of hard firm fat in the abdomen, reduce the amount of grain, compelling them to eat more mash.

An important item where good winter egg production is desired is to furnish green feed in some form. A silo is a big asset as silage is much relished by poultry. Potatoes, beets, turnips, cabbage, etc., fed raw furnish a good relish. Where any of the above cannot be secured, alfalfa leaves or beet pulp may be placed in a bucket and covered with warm, not boiling, water, and allowed to stand for several hours. This may be fed alone or mixed with bran.

Epsom salts dissolved in water and mixed with a portion of the mash is highly beneficial. It may be fed twice a month at the rate of one-half pound to each one hundred hens.

Never forget that plenty of fresh water from which the chill has been taken is just as essential to egg production as feed.

Keep the hens out of the snow in a house that is dry and well ventilated.—Norton L. Harris.

VALUE OF CULLING POULTRY

At a meeting of farmers this week where a round table was conducted as a feature of the hour, a man who said he made a specialty of poultry declared that his net profit per hen for the past year had been $6 [illegible] and that this success was due in great part to careful culling of the hens he kept, under the direction of a boy of his who was connected with the Agricultural College at Cornell. Other men present confirmed the man in his belief that where many make mistakes is in keeping year after year hens that never have paid their way and never will. These all ought to be culled out, and they would be if farmers understood the cost of keeping such worse than worthless hens and the uselessness of keeping them on the farm. A good many, too, do not really know what culling means as a practical matter. For these people, the following principles are certainly sensible and easy to be put into practice.

Begin by breeding only the very best stock. Eggs from hens that are not vigorous and in the prime of life never ought to be used for hatching purposes. If after chicks hatch any should seem to be weak or lacking in bodily development, they should be weeded out at once. Every day such chicks are kept means a loss. All old hens ought to be culled out. Profit comes from young hens. There are few exceptions to this rule. Every pullet that does not develop properly should be set aside. It is almost always possible to detect these, as they are undersized and lack vigor.

But the best thing of all is to watch every single hen and find out exactly what she is doing. This takes time, but it is worth it. Why should we guess at a hen's egg production any more than we should at the yield of a piece of corn per acre? The only right way is to keep account of the eggs different hens lay and then act accordingly. A hen may do fairly well. That is not enough. What we are working for is the hen that will do more than a fair year's work. Every hen must prove her title to be kept in the flock. It may be said that this study is too costly, but that is not so if we are in the business to make a profit. In fact, we must closely cull our hens.—E. L. V., New York.

DECEMBER POULTRY REMINDERS

Be sure that there is plenty of litter on a wood or cement floor before the hens roost in the building. Jumping from the roosts to the floor sometimes causes a swelling on the foot which is called bumble foot. The roosts should not be too high causing the birds to light on the floor with a heavy jar. Many farm poultry houses are too high above the roosting platform and then the roosts are placed high to bring them near the roof. The hens have a hard time warming up such a house and jumping from the high roosts is apt to cause trouble. A hen with bumble foot might as well be killed unless very valuable as a breeder. It is difficult to operate on the bottom of a hen's foot and keep infection out so that healing will rapidly take place.

* * *

Many questions from beginners concerning poultry culture would indicate that they think there is a road to easy money raising poultry. They just want to know the secret and often believe that every successful poultryman must have a lot of secret ways of making money producing eggs. But the knowledge of the trade is free to all who are willing to read and work. There is no easy money in egg production or eggs would be very plentiful and cheap as soon as a lot of people discovered the easy methods. Every farmer who properly cares for his hens knows that he must deduct feed costs from the egg checks and then he cannot lead a very wild life on the money that is left.

* * *

Buy a box of different colored leg bands and order enough so that you will have them on hand for a year or more. When you observe a fine late molting hen slip on a band. That hen will be useful next spring in producing pullets which may also be late molters and heavy layers. When you buy cockerels from another breeder, slip on each and then you can watch the development of those birds while they are ranging with your own flock. A neighbor purchased a $10 breeding cockerel from a fine trapnested hen and turned the cockerel lose with their flock. For about a week they could tell which bird was worth ten dollars. Then they had an argument as to which was which. Soon they didn't know. Later that cockerel had about one chance in 200 of being saved when they sold broilers and breeding cockerels to other farmers. Their ten dollars was largely wasted and now they band all birds to be saved for breeders in the home flock.

* * *

Hens that have the range of corn fields will clean up many bags, weed seeds and cull ears of corn from the ground. The birds may hesitate to enter the field more than a few feet when the stalks are a tall waving forest but when cutting is over and the field is open between the shocks the hens will range a long distance and find much that is good for them. But do not leave moldy ears on the ground to rot and then be eaten by the birds as it will be apt to cause digestive troubles.

* * *

As the nights grow colder it pays to watch the houses and see that none of the pullets are crowding together in the corners of the house instead of using the roosts. This may result in colds. Remove all pullets that roost in the nests or on the feed hoppers. The habit can be broken in a few nights if taken early.—R. G. Kirby, Michigan.

CONTROLLING LIMBERNECK

Limberneck is caused by fowls eating decayed animal matter such as a dead hen dug up on the range by dogs. Dogs may bring decomposed animal matter to the poultry range from other farms. One authority says that eating the maggots which come up thru the ground from a dead bird may cause limberneck. Another states that the maggots may be found in the fowl at the post mortem but eating the decayed meat and not the maggots is the cause of the death.

Prevention is the safest and this can be done by keeping poultry on fenced ranges and burning or burying deeply all dead fowls, rats and other animal matter. A hen with limberneck loses control of its neck muscles. The head twists from side to side and the bird staggers. The disease has not been found to be contagious. It may seem infectious if several birds become afflicted with the trouble. But the apparent spread will be due to many of the birds eating of the same spoiled material.

Gum asafoetida has been proven to be the best remedy for cases of limberneck. A piece about the size of two peas should be given an old hen every three hours until three doses have been used. Then keep the bird isolated where it can be watched occasionally and after a couple days give two more doses if the bird has not improved. Limberneck should be treated as quickly as discovered or the bird will become devitalized and the cure made more difficult.—R. G. Kirby.

Profiteering is one word that has come to stay. But the profiteering hens and cows should not be allowed to stay on any farm.

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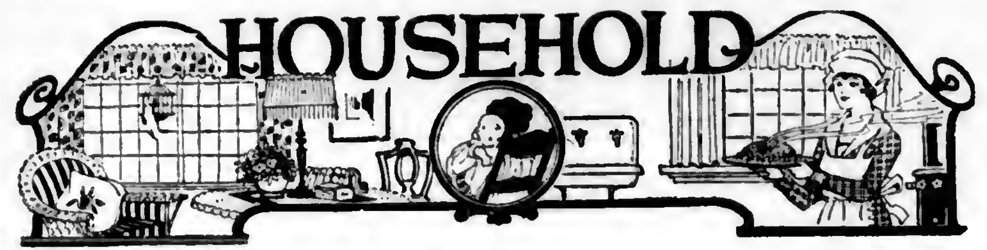
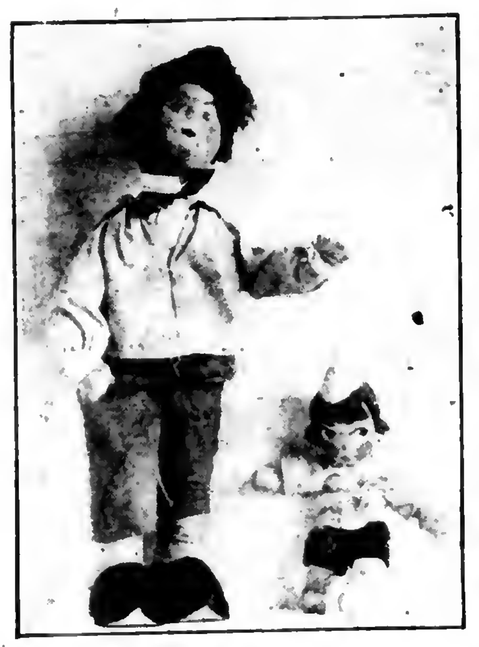


RAGGEDY DOLLS FOR CHRISTMAS

Who of us grown-ups does not recall some little cherished possession of our childhood? Perhaps it was merely a trifling toy fashioned by fathers' clever fingers from a block of wood, or a "raggedy doll" made by mother from the scraps in her "piece" basket.


Jan and Katinka

Baby who is just beginning to creep will enjoy nothing better than one of these dolls. The pattern for making all of them is simple.

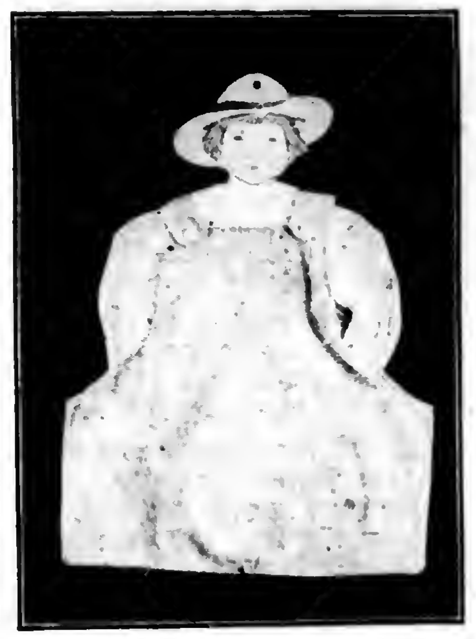
For instance, to make a lady, cut a stiff pasteboard circle five inches or so in diameter, and cover with turkish towelling. Make a stout unbleached muslin bag just large enough to sew around the pasteboard circle. Cut another the same size from the turkish towelling. Sew the edge of the muslin bag to the circle with fine stitches on the outside. This makes a cylindrical bag with a flat bottom. Buy a cheap non-breakable doll or a kewpie and put its legs into the bag, and fill with sawdust or bran, or, better, cotton batting around the doll's legs. Pack tightly, and draw up the top of the bag by its stout drawstrings closely around the waist of the doll, and fasten firmly. Then draw up the towelling skirt drawstring around the doll's waist. Thus the skirt may be removed for washing. Any other material may be used for the skirt instead of the towelling.

Look at Dutch Jan and Katinka shown herewith. They are very easily made at home. First wad some cotton batting into balls for their heads. Then slip a plain piece of outing flannel over the wadding, and tie it around and around with string at the neck. The rest of the cloth will serve for the bodies. Now fold a piece of turkish towelling in the middle, slit perpendicularly for the legs, sew up the leg portions, and stuff. The feet, hands and arms are made separately and sewed on.

Mark on the features of Jan and Katinka with brown, blue and white watercolor paints. Use brown yarn to make the hair, and glue or sew it to the heads. A red crocheted cap with a tassel should be made for Jan, and for Katinka make the coquettish little cap shown herewith. Dress Jan in a white shirt, Turkey red pants, and tan blouse and shoes made of pasteboard covered with red calico to simulate wooden shoes.

The "Farmer Laddie" will also please baby. If father is deft with his pocketknife, he can whittle out a small wooden figure for the foundation for this doll. This is merely a stick surmounted by the shaped head of the end of the stick. The features are then marked on with paint, and the hair and hat are glued on. Cotton and blue denim are used for the shirt and overalls. Farmer Laddie has no feet. Before sewing his overalls together at the bottom, stuff them with cotton and a weight of some kind so that he will stand up alone.

This same idea may be carried out by using outing flannel to make the head, as for Jan and Katinka. To make the body thick enough in such case, you can wind cloth around the extension of the cloth below the neck. Arms may be made, if desired, by passing narrow strips of cloth around the body at a proper distance from the head, and tying in a knot at the back to hold them in place, and tying knots on the ends to serve for hands. To dress, cut a slit in the middle of a piece of cloth, squeeze the head thru the slit. Make overalls and slip over the figure.


Farmer Laddie

Mrs. Bunny is an ideal companion for baby. She is made by cutting outing flannel or turkish towelling into two sections, then stitching up along the sides. Then stitch on a little semblance of a gingham apron, and paint on the eyes, nose, whiskers and a semblance of paws. Stuff with cotton. Add a long double fold of the goods at each side of the top of her head for ears, wiring them inside to make them stand upright. A little Peter Rabbit hoe whittled from wood, and a little Peter Rabbit roly-poly doll made out of cloth will tickle baby.

A realistic Br'er Rabbit may be made by cutting out a rabbit figure from turkish towelling, first cutting a paper pattern to insure accuracy. This requires no skill, as the rabbit characteristics are made by means of paints. Cut so that the seaming will come at the back thru which to stuff the figure. Wire the ears so they will stand up. Stuff the rabbit with cotton. To make Br'er Rabbit able to stand alone, put a weight in his haunches as you stuff him, then sew him to a circle of cloth-covered pasteboard.—Louise E. Dew, New York.

SUET FOR SHORTENING

Lard and lard substitutes have been so high in price that I have been experimenting with suet for shortening, and find that I can use it for almost verything that I bake, without detracting from the quality of the food.

When lard was 35 cents a pound, I could buy raw suet for 14 cents and there is so little waste that a pound of raw suet means practically a pound when ready for use.

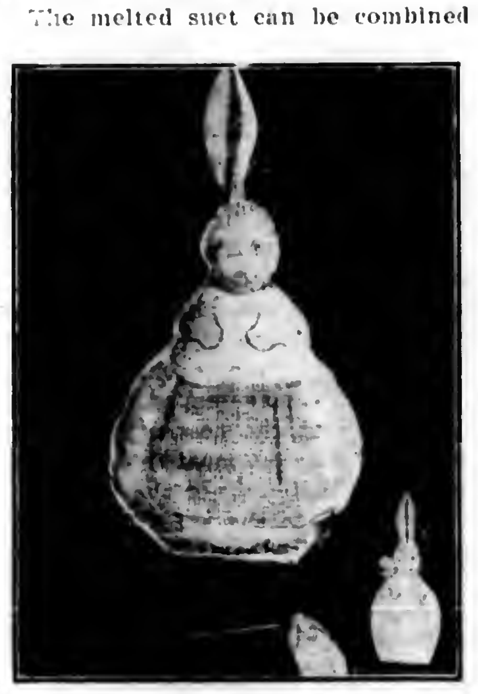
When properly tried out and cared for, it can be kept almost indefinitely, as it becomes so hard that it is impervious to moisture or mold.

From one-third to one-half suet can be used in almost any food in which lard can be used if the suet is finely shaved so that there will be no lumps that will not be rubbed out.

To try out the suet, cut it in small pieces and put either in a pan in the oven or in the top of the double boiler over water on top of the stove. Cooked in this way, there is no danger of burning, and no smell to go over the house. Cook it until the lumps are entirely free from fat and begin to color. Then remove the scraps and let the melted fat remain hot for awhile before straining it into the molds to harden. It should be poured into rather shallow molds, since in cooling the outside becomes very hard and brittle, forming a perfect seal. With shallow molds only a small surface will be left exposed when it is shaved off for use.

The suet, when taken from the molds, can be pushed down into the sack of flour if desired, this keeps them from contact with the air. However, I have kept suet for months without any protection.

The melted suet can be combined with lard, if liked, at the time of rendering. Stir the lard into the hot suet, and keep stirring until it is thoroly mixed. Then pour into lard pails to keep.—Mrs. H. M. Woodward.


Mrs. Bunny

AIDS FOR MEASURING

Even with good weighing and measuring tools, it will be handy to keep this table where you can readily refer to it.

3 teaspoons liquid equals 1 tablespoonful.
4 tablespoons liquid equal ¼ cupful.
1 tablespoon liquid equals ½ ounce.
4 cups flour equal 1 quart or 1 lb.
3 cups cornmeal equal 1 lb.
1 cup butter equals ½ pound.
1 pint of butter equals 1 lb.
1 tablespoon butter equals 1 ounce.
Butter size of medium egg equals 2 ounces.
2 cups chopped meat equal 1 lb.
2 cups (1 pint) granulated sugar equal 1 lb.
2 cups brown sugar equal 13 ounces.
2½ cups powdered sugar equal 1 lb.
1⅞ cups rice equal 1 lb.
2⅓ cups dry beans equal 1 lb.
4⅓ cups coffee equal 1 lb.
8 large eggs, 9 medium eggs or 10 small eggs equal 1 lb.

A Thickening Table

1 level tablespoon flour will thicken 1 cup liquid for soup.
2 level tablespoons flour will thicken 1 cup liquid for gravy.
5 level tablespoons browned flour will thicken 1 cup liquid for gravy or sauces.

The thickening power of cornstarch is about twice that of flour.

4 level tablespoons cornstarch will stiffen 1 pint liquid for puddings.
2 eggs per 1 pint of milk will make a custard.
1 egg per cup of milk for a baked custard.

Leavening and Shortening Table

Use 2 level teaspoons baking powder per 1 cup flour.
Use 1 teaspoon less of baking powder per each egg after 2 are used.
Use ½ teaspoon soda per 1 cup sour milk or molasses.
2 teaspoons baking powder equal teaspoon soda.
2 cups flour require ½ cup shortening for pie crust.
2 cups flour require ¼ cup shortening for cookies.
2 cups flour require 3 ounces of shortening for cakes.
2 cups flour require ⅓ cup shortening for shortcake.
2 cups flour require 1 to 2 tablespoons shortening for tea biscuit.

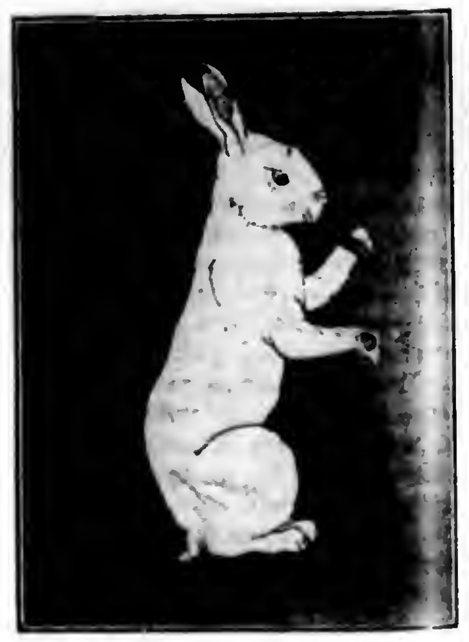
—Mrs. F. W. Stillman, Union Co., New Jersey.

HOW TO BE HEALTHY

Why Fresh Air Is Good Medicine

Every one knows that fresh air is one of the best medicines and is evidently one of the cheapest. More and more doctors are prescribing "the fresh air cure" for all sorts of diseases. Yet not all people know fresh air when they see it or realize to what it owes its tonic qualities. Here are the principal signs by which you may know "fresh air."

1. Fresh air is cool air. Air that is above 68 degrees Fahrenheit is always harmful except for very old people. Whenever the indoor temperature rises above this point the circulation is upset, one tends to become dull, languid, and inefficient and the delicate membranes of the nose and throat are injured so as to cause a great liability to colds and other respiratory diseases.


Br'er Rabbit

2. Fresh air is moving air. Still air blankets the body and produces a deadening, numbing effect. Air in gentle motion stimulates the skin.

3. Fresh air is moderately moist air. Either very dry or very humid air is harmful.

4. Fresh air is variable air. Slight changes in temperature and humidity are stimulating and wholesome for the body.

These four qualities are always found to the best advantage out of doors and it is for this reason that sleeping, working and living in the open is one of the best ways of keeping the body fit, vigorous and efficient.

When you must be indoors, don't forget your good friend, the thermometer. The best thing that ever happened for the health of the children of New York was a regulation requiring the placing of a thermometer on the front of every teacher's desk, with a heavy red line opposite 68 degrees. A thermometer of this kind in every living room and work place, with somebody watching it to turn off heat or open windows as soon as the temperature passes 68 degrees, would cut in half the number of colds and other nose and throat diseases from which Americans suffer as a result of overheating.—Prof. C. E. A. Winslow, Yale University.

TOO MUCH EXERCISE

I am wondering how many New York state country fathers and mothers realize that now when they send their boys and girls to their own little rural school they are being taught at least the rudiments of military training. The rural teacher is given no choice in the matter. Every taxpayer in the state must help foot the bill, and the cost to each district constitutes no small item of expense. No one would more cheerfully pay the extra expense than I if we were receiving full value therefor in benefits to our boys and girls. But just what are we receiving?

Supposedly the otherwise unused muscles are being called into used by these "scientific military exercises," but can these muscles be exercised independently of the surrounding ones? In the country every farm boy and girl old enough to do anything, and every rural teacher, as well, is obliged to keep their muscles overworked a good deal of the time because there is now so much more work on the farms than there are workers to do it that we all have to "get into the collar."

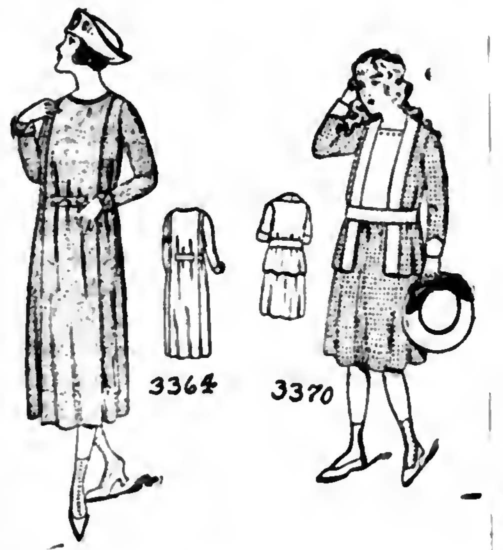
My own case illustrates this point. I am a rural teacher. I am always exceedingly busy, and have been well and have eaten with the appetite of a harvest hand. But last Monday I attended the teachers' military training conference, and since then have been so played out all the week that I have done nothing else than my teaching whereas I had previously cooked the breakfast and supper and otherwise helped cater to the needs of a family of five persons. I have eaten very little, and wished that I had not eaten what I did. This is a condition that I have never before experienced.

Luckily my pupils do not get this overdose of exercise, but they have been complaining for a month of being too tired, and their parents are objecting quite strenuously. I have yet to discover any good reason for this requirement, and it is up to the voters of our state to dispose of this "training" as they did of the Mac-hold law.—Mrs E. M. Anderson, Chautauqua Co., N. Y.

PENNSYLVANIA FARMER PATTERNS

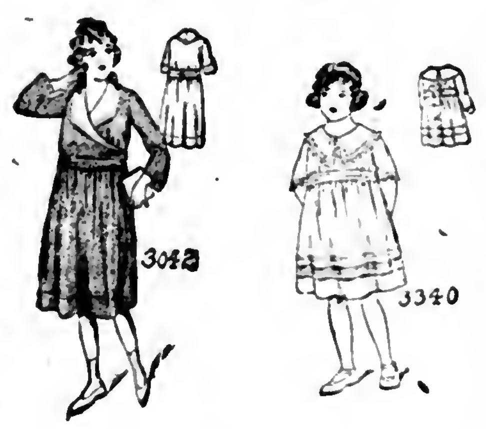
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

3364.—A Youthful Popular Style.—The pattern is cut in 3 sizes: 16, 18 and 20 years. Size 18 will require 5 yards of 27-inch material. Serge, duvetyn, tricotine, velveteen, satin, taffeta and wool mixtures are good for this model. The closing is at the side under the front panel. This dress measures about 1⅞ yards at the foot. Pattern, 10 cents.



3370.—Attractive Blouse Suit.—The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. A 12-year size will require 3⅞ yards of 38-inch material. Gingham with facings of linen would be nice for this design. Or, taffeta trimmed with satin or foulard. Serge, gabardine, poplin, and velveteen, are also attractive. Pattern, 10 cents.

3042.—Girl's Dress With Surplice Waist.—Serge, gabardine, poplin, voile, checked and plaid woolen and all wash fabrics are good for this style. The collar and cuffs may be of contrasting material. The dress has a body lining. The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. Size 10 requires 4½ yards of 27-inch material. Pattern, 10 cents.



3340.—Dainty Frock for Little Miss.—The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. A 6-year size will require 4 yards of 27-inch material. Voile, dimity, batiste, crepe, challie, silk and serge are attractive for this design. Pattern 10 cents.

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COUNTY NOTES

Mercer Co., Pa.—This fall has been exceedingly dry excepting the past ten days which has been wet and cold. A small skiff of snow last week. September and October were very dry, some springs very low. It was fine for digging potatoes but not so good for corn husking. Potato crop was fair. Average fields running around 100 to 150 bushels per acre with a few exceptional fields in each community that went 200 to 250 bushel per acre. Prices for potatoes were generally $1.25 per bu., although a few sold for $1.50 at the farm. Farmers were not satisfied with this price as they planted seed last spring that they could of sold for $4.50 to $6 per bushel, and this together with high cost of labor, fertilizer and other expenses, the farmer feels that he is not getting a fair price for his potatoes. Corn is quite a good crop in this section but not quite so heavy a crop as last year. Oats were a very good crop this year a number of fields running 70 bu., or more per acre. Wheat was almost a complete failure, the fly doing more damage to the wheat in this section this one year than the writer has seen before in his life time. Buckwheat was a fair crop but not a great deal raised in this section. As a rule buckwheat is raised only on a field that has missed a crop of something else and buckwheat is sowed as a catch crop or used to tame new ground, etc. Hay was an average crop. Pastures have been dried up for some time. There are many farms selling this fall. A number of city people who have bought farms and are now selling them and going back to the city again, while on the other hand there are a number of farmers who have farmed all their life that are selling the farms and going into other business. The reason for this is as a rule the scarcity of farm labor together with unsettled prices. There are many public sales this fall and stock of all kinds are selling rather low. Prices are about as follows: Potatoes, $1.25 bu.; corn, 75c; oats, 70c; wheat around $2; hay, $18 to $20 per ton; straw, $10. Eggs 65c doz.; butter, 60c b. Horses are selling very low at sales as are cows also. Hogs are around 20c yet and chickens from $25 to $30 per lb. Turkey very high, 45c lb., ducks, 22c. So far the corn crop is only partly husked and much other fall work to be done before winter. Apples are a good crop this year and not very good sale except some of the best winter varieties.—P. M., Mercer Co., Pa., Nov. 23.

Tioga Co., N. Y.—Tioga County is having a drive for Farm Bureau members and Home Bureau members, Red Cross members, etc., and the people are responding nobly for these splendid works. China's great famine also needs aid. The potato crop was bountiful, but in many fields the tubers decayed badly and some patches were half rotted. Many thousands of bushels are stored in the farmers' cellars, awaiting a price that will pay the cost of production —80 cents to $1 per bushel being the highest offered. With the exceedingly high price for seed potatoes and the high cost of labor, the farmer might as well have not raised the crop. Threshing is not all completed as yet, but is being pushed rapidly forward.—M. I. C. A.

Snyder Co., Pa.—We are having very nice November weather again. We had a touch of winter with rain, sleet, snow and very cold during last few weeks. Corn crop is nearly all put away with a good yield. Farmers are busy with corn threshing and butchering. Markets: Wheat, $1.80 bu.; oats, 50c bu.; rye, $1.60 bu.; corn, $1.10; butter, 54c lb.; eggs, 70c doz.; ham, 35c lb.; lard, 22c lb. Chickens, 22c lb. People generally well.—S. D. D.

GAME IS PLENTIFUL

Trappers are busy trapping animals for the fur, which still continues to command a high figure. Muskrats, minks and the skunk are numerous. In fact more skunks abound than in many years. Two years ago the snow was so deep that little trapping was done, and they grew and multiplied until the highways are filled with the wobbly, ungainly creatures, which move out at their own leisure. Numerous motorists have run over them and scented up their machines. From now on until the law says "hands off" trappers will put in good time, and reap a bountiful harvest. In fact, some have already started quite a bank account at the business.—M. I. C. A., New York.

AGRICULTURAL EXHIBIT

Pioneer Grange of Cranbury, N. J., co-operating with the Middlesex Co. Board of Agriculture, conducted an agricultural exhibit in the Grange Hall on Tuesday, Nov. 23, 1920.

The large attendance and the general interest shown were especially gratifying as this was the first exhibit of its kind in the county. Prizes were offered by the First National Bank of Cranbury, First National of Jamesburg, H. R. Disbrow & Son, and J. S. Silvers & Co.

The exhibits of potatoes, corn, bread, cake, canned goods and milk dishes were judged in the afternoon and in the evening an open meeting of the Grange was held which was largely attended. Splendid addresses were given by Alva Agee, secretary of the State Board of Agriculture; Prof. Martin of New Brunswick, Congressman E. C. Hutchinson, of Trenton; David J. Perrine, president of Middlesex Co. Board of Agriculture, and Mrs. Hornblower of the New Brunswick Experiment Station.

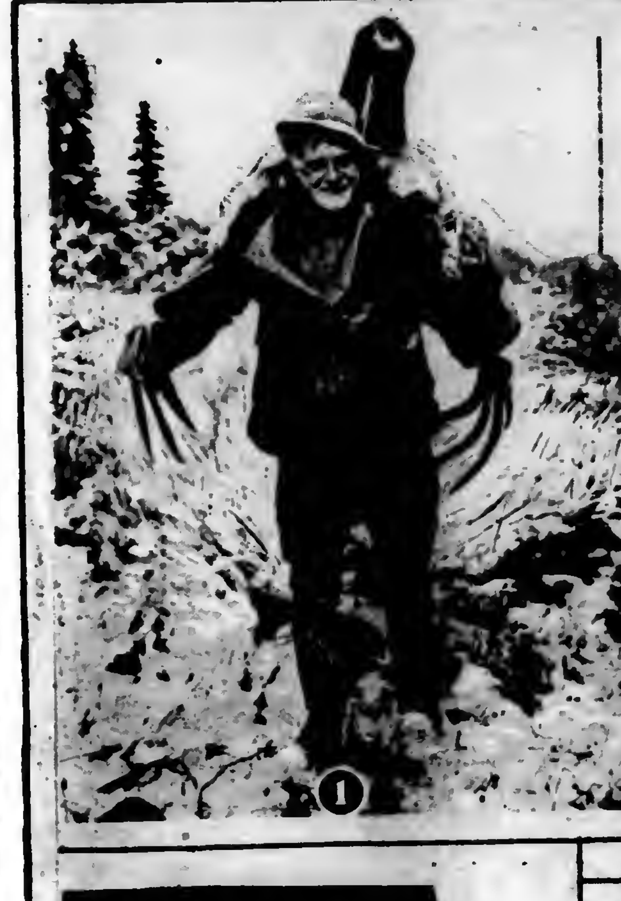
JERSEY FARMERS STRONG FOR NATIONAL FEDERATION

Monmouth County, N. J., famous thruout the country for its big potatoes, its fine fruit, and vegetables, its fertile farms and its prosperous farm homes, and standing among the foremost agricultural counties in the United States, has scored another big success. Of the 1500 odd farmers in the county who have been visited since the farm bureau campaign opened two weeks ago, 1230 have subscribed $5 each for joint annual membership in the County Board of Agriculture, the State Council of County Boards, and the American Farm Bureau Federation. Canvassers found the Monmouth County farmers enthusiastic for the organization, and the conviction seemed to be general that the farmers as a body need to co-operate closely in order to insure the proper marketing of their produce and to give them an adequate voice in county, state and national affairs.

But Mercer County, altho smaller in numbers than Monmouth, is not to be outdone in spirit. Mercer's drive began Nov. 22, and on the first day East Windsor Township signed

(Continued on Page 19)

PASSING EVENTS IN PICTURES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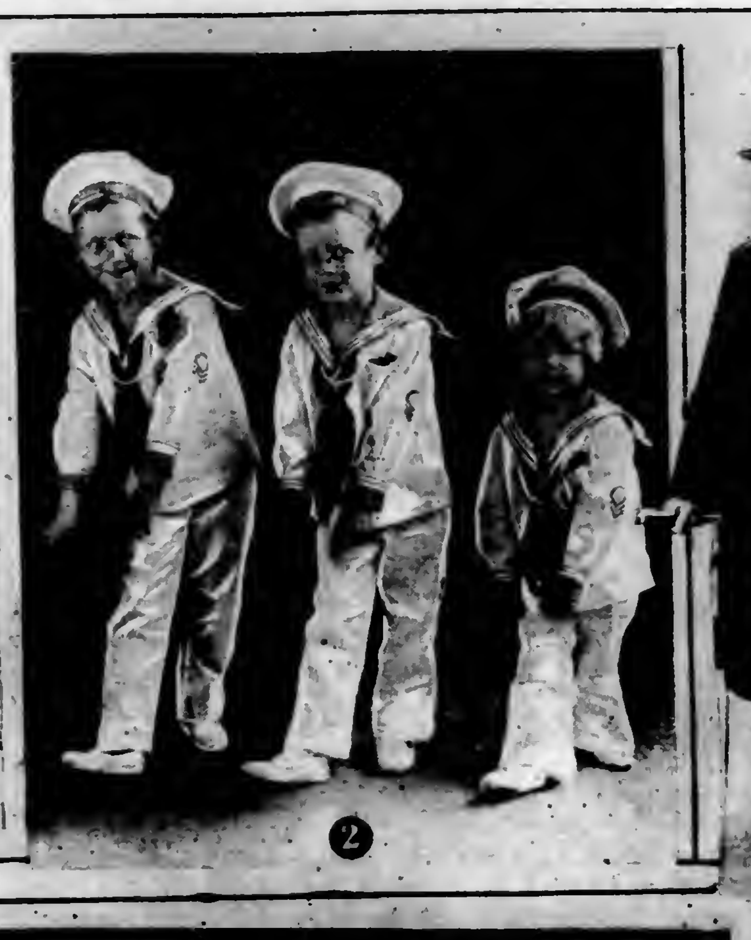
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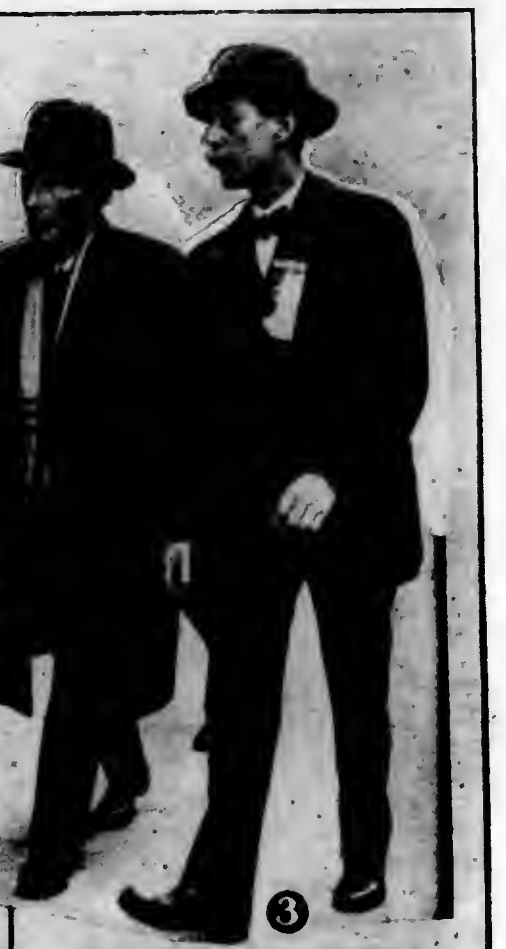
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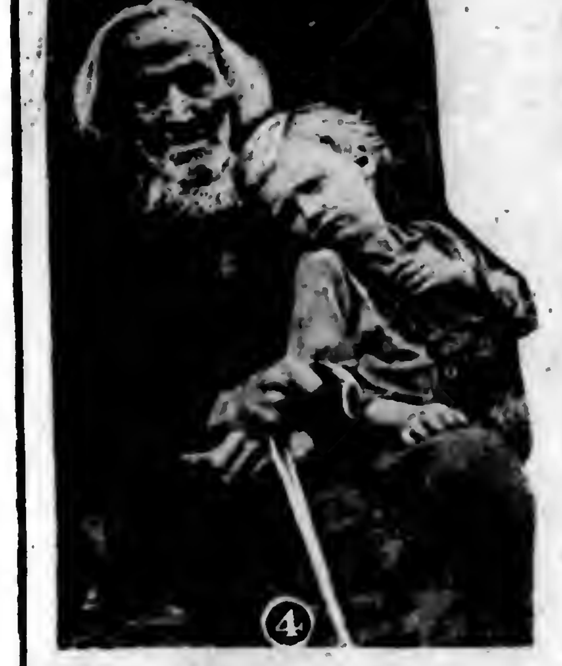
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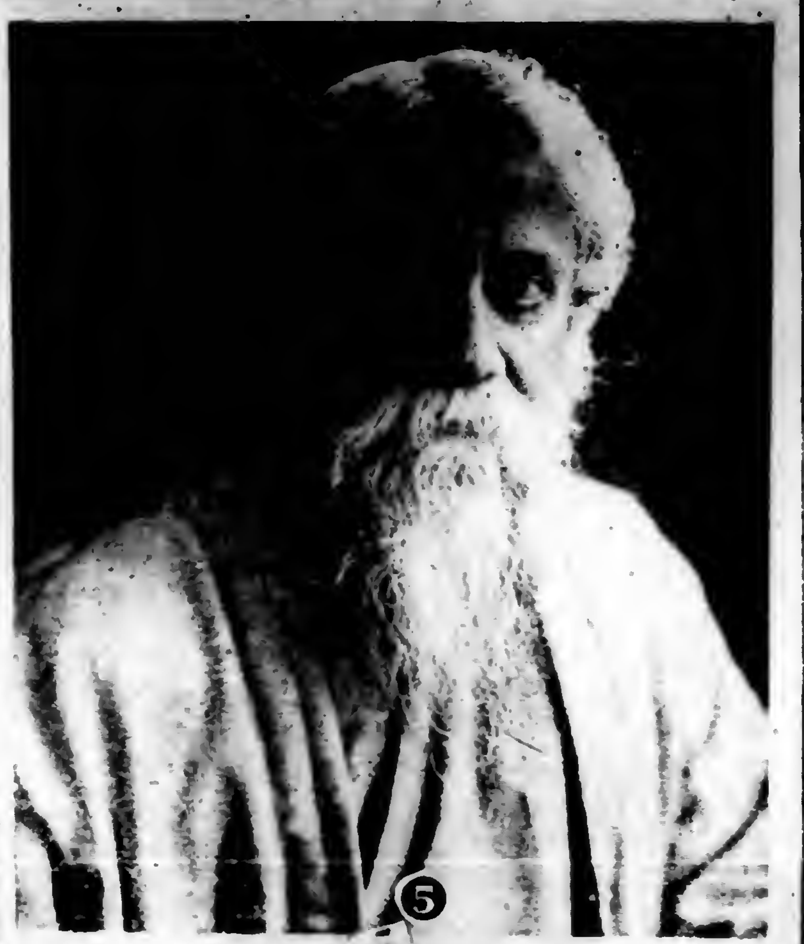
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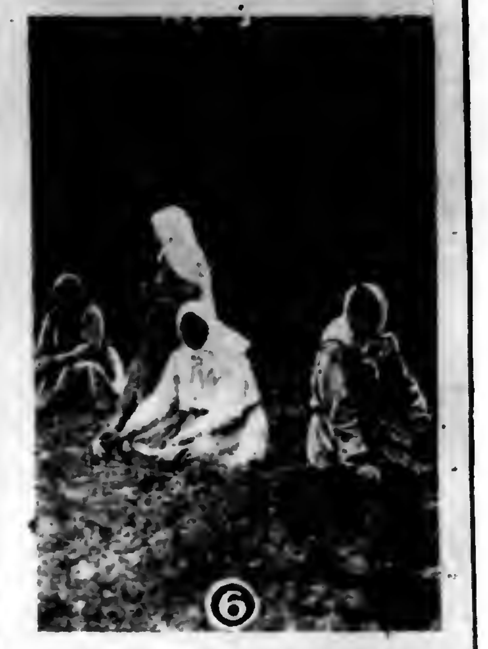
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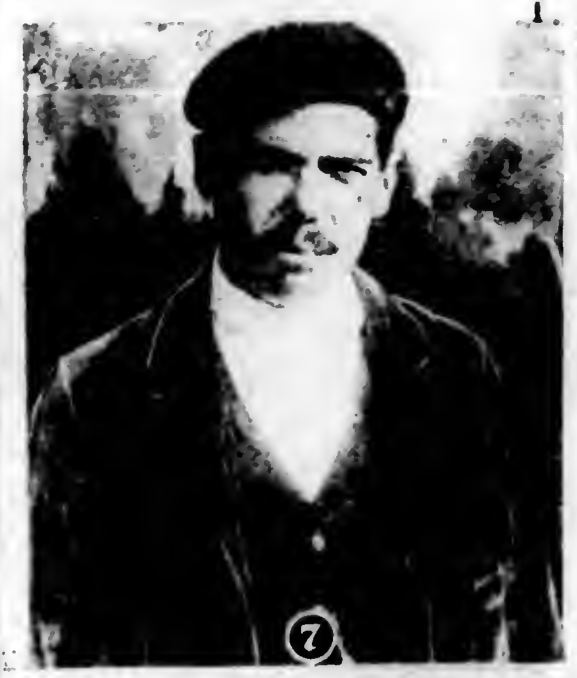
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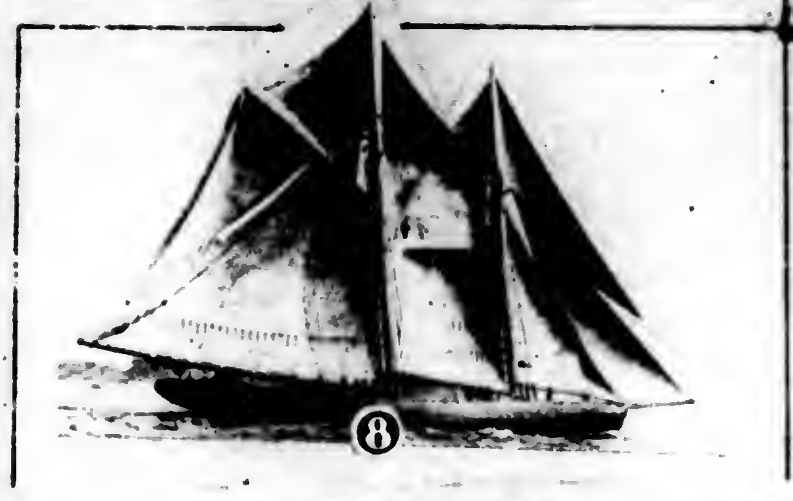
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1—Major W. C. Gottschall, back from British Columbia with big game.

2—These jolly little "tars" are Frank, Robert and Herbert von Arx Burkhardt of Washington, D. C.

3—John D. Rockefeller and Secretary, on their way to cast their ballot.

4—"Uncle" John Shell and son, 131 and 5 years of age, respectively. "Uncle John" was rejected for service during the Civil War, as being too old

5—Rabindranath Tagore, Bengalese Poet and Philosopher, who is on a lecture tour of this country.

6—Russian peasants, dissatisfied with conditions in Russia, and who have settled colonies in British Columbia

7—A type of Spanish immigrant, which may solve the farm labor shortage.

8—The U. S. Schooner "Esperanto."

9—Chas. Way, Penn State's half-back, who has proven quite a sensation

A Homely Tale of Christmas Cheer

By JENNIE LITTLE

"Am I to understand that none of you intend going home for Christmas, and that you have not spent a holiday there together since I left?" and Capt. Lawrence Porter in blank amazement studied in turn the faces of his three sisters.

There was an uneasy movement of silence, then Lilah, the eldest, hastened to explain.

"Why, you see, Larry, Rob feels that he shouldn't leave his practice again so soon after his trip South with Senator Hastings, and Mabel finds it hard to travel with the children. We all think that as Father and Mother are getting along in years, perhaps this extra work and excitement isn't best for them. Also it means a lot of expense, and times are hard, you know. We have no idea that you were going to arrive in time, so as we all received stunning invitations that it would be most unwise to refuse, both for social and business reason, why—"

"Bosh!" interrupted her brother elegantly. "All your excuses are so thin they wouldn't bear the weight of a water spider on ordinary days, much less on special ones. Pigs is pigs!—and Christmas is Christmas! when families ought to be with the only father and mother they'll ever get, and that's my creed in a goober shell. What's a little more added to the High Cost of Living, compared to the Heavenly Comfort of Love? If it was impossible for you to go, why didn't you have them come on and enjoy the holidays in your beautiful home? Ashamed of them, are you, before your fine society friends?"

"Certainly not," said dignified Helen. "Don't get a fit of heroics, Larry. You know yourself that circumstances alter cases. Mother must realize that we are no longer children, and have responsibilities in our own lives that cannot be overlooked or lightly set aside. But if you and Muriel will stay a few days, perhaps some of us could go on with you later."

"Not on your life-" said Larry. "We wouldnt' have stopped a minute after landing in New York if I hadn't been sure you would all be ready to start along with us. I want what I want when I want it, and it's 'Home, James,' for me, in time to present their new daughter. And I'll tell you more—I used to think the farm was altogether too narrow a scope for such a brilliant headpiece as mine, but I've learned a few things over there," and in operatic style he sang:

"'I'll plow-ow and sow, and reap
and mow,
And be a farmer's bo-o-y.'
We'll show them how, from Missoury
to Maine, won't we, Muriel?"

"Just that," agreed his little English bride, sweet as a daisy from her natives hedges in springtime. "With no parents of my own, I can scarcely wait to share yours. Couldn't we possibly all be there to celebrate this special occasion?"

Dr. Meredith stepped in from his office. "The echoes of your gabfest have so distracted my attention that I didn't hear half the weekly report of old Mrs. Cox's 'miseries.' Larry, come off your perch; you remind me of a doodle-bug waving his antenna. Lilah, I move that we all send regrets to those other affairs where neither our presence or absence will make much difference, and have another good Old Home Week at Cedarvale. And if Mother Porter has no stock of caraway cookies with raisin eyes, I shall deem life a vain and fleeting show!"

"Second the motion!" shouted Larry. "Behold We, Us & Co. embarking on the first morning train, and though we may have to sit up all night to trim the tree, we'll get there just the same."

Mabel sighed resignedly. "Muriel, you see how bossy he is—take warning. He always did like to rule the roost long before he grew up. Once the teacher in Sunday School called on him for a Scripture verse, and he electrified the class by quoting, 'Let him take who has the might; and let him keep who can.'"

"Madam, I need the floor again," interrupted the bossy one. "How about presents—ready? And what are they?"

Lilah flushed. "Why, we mailed them, as we were not going. Mufflers, slippers, and wool gloves for Father, and some warm wrappers for Mother. There are so few things to choose for old people."

Larry's expression of disgust checked her. "Say," he snorted, "do you consider them mummies? If ever a person gives me a muffler after I'm fifty, I'll throw it at him. Let them buy their own necessities, but give them something different, that they would think was extravagant to buy for themselves. Wait!" and he ran up the stairs two at a time, reappearing with a bag, the contents of which made the sisters "Oh!" and "Ah!" in admiration. Wonderful French needlework, collars, laces, old-world treasures gathered at every opportunity.

"Think you will be too old some day to enjoy things like these?" he queried with brotherly sarcasm. "Well, mother isn't, and there's a different line for Dad. Mother old! Why, she wrote me not long ago that she would love to have her hair bobbed like the other girls. And I remember that she always wished that she could transform into a fluffy Persian, ever successive old Tabby that has graced the kitchen."

"Then while we hurry to get things ready to leave tomorrow," suggested Mabel, "you and Muriel must do some eleventh-hour shopping for us. I leave my list to your judgment."

"Now you show the wisdom of Solomon," and Larry strutted in mock pride for his cap and coat, while the group dispersed happily to prepare for the grand finale.

Far away in the cheery living room sat the old folks, all ignorant of the discussion and also of the workings of mental telepathy, but occupied with thoughts of the absent. The swish of snow against the windows made the dancing flames inside more alluring, and the canary, who should have had his yellow head tucked under his wing long ago, cheeped and rustled comfortably. Mother's darning basket lay idle in her lap, as her gaze peiced together the firelight pictures, till suddenly an unruly tear persisted in making itself public, and went rioting down her cheek. She made a furtive dab at it with a stocking, but was caught in the act.

"Mother, you're crying!"

"Cat's foot!" she snapped, "it must be that onion I peeled, still making my eyes water," but as he eyed her with concern, she lost her bold front. "I'm just starving hungry to see four stockings hanging there again. I don't blame little tads for kicking and crying for the moon, for I know just how they feel about it. Sometimes I'm wicked and selfish enough to wonder if it pays after all to help your children fill such a big place in the world that they grow out of your life."

"Oh yes, now, Mother. Why, if the colts we raised just settled down contented to eat pasture grass, and never capered around trying to find a loose bar to kick down, so's to get out, we'd think they wa'n't worth much. Wouldn't you rather have them turn out a flock of prize swans, than common hum-drum ducks? And even if we can't have them any more, we know we've done our duty, and that isn't to be sneezed at. We didn't cast our bread on the waters, just to have it come back buttered and jellied, did we?"

"It's all just as you say, Pa, but that don't cure my hankerin'," she said stubbornly. "If only my baby could have come for this Christmas. I've prayed with all my might, but I must have asked it in a selfish way, or some other soldier who was needed more, say by a widowed mother, was discharged instead. I'm kind of feared that his new wife will persuade him to stay in England. Queer there's no letter."

"Mother," said her Darby with a grave hesitation, "I don't suppose you could be happy in some other place, could you? You know how hard it's been to run things lately, with no help, and my rheumatism so bad. Today Hiram Warner offered me a good price for the third time, and if I don't take him up in a week, he'll buy somewhere else. I've been hangin' back in case the boy did come home, though I haven't much hopes that he'd stay here and farm. We could buy a little house somewheres, unless you wanted to go to the girls."

"Never!" cried Mother. "With my old-fashioned ways I'd fit in their homes about as well as Tubby Gates would in my little rocker. I never breathed this to a soul before, but the only time I ever saw Mabel's babies, she warned me that kissing them was terrible dangerous, and rocking was simply a crime. Patience alive! If germs and cuddling are so deadly, it's funny how my four pulled thru. I wanted to remind her that 'twas a good part of her own bringin'-up, but I held my tongue, though I didn't dare to stay in the room with the babies any longer, for fear I couldn't keep my hands off them. I must confess that it will be an awful wrench to leave here, with every spot full of mem'ry pictures of the children, 'pecially in their school days. Every time I sent one off to school for the first day, I felt like a swallow pushing her little birds out of the nest."

Father chuckled. "Guess you hadn't no call to feel squeamish about Larry's deebut. As I remember, he started out the first morning with confidence for seven, ready to conquer the world before noontime, and thought the teacher underrate because she had to ask him how to spell dog."

"The blessed litle tyke," laughed Mother softly. "Will you ever forget how he put pepper-sass in the vinegar cruet when we had company, and the minister nearly choked himself, he got such a dose? I was too mortified for words. You know best about selling, Pa. I wouldn't mind so much if I could have them all here for one more Christmas. What has got into me for settin' my heart on what I can't have? I'm ashamed to say it, but I'd even like to have something frivolous for a present, so's I couldn't guess what was inside the package. But think how Joseph and Mary must have wished for comforts for themselves and little baby, and then were so thankful for even a manger. Well, as Aunt Pamela says, ''Tis as 'tis, and it can't be no 'tiser,' so I'll try and make the best of it, and not be a Calamity Jane, putting a damper on other people's fun."

"How does this strike you, Mother? S'pose we invite that lame soldier chap from the boarding house, so's he won't run the risk of having hash or cabbage for once, and the little dressmaker that's never took time to be young; and crippled Benny Doleman told me he couldn't guess how turkey tasted. Who else to make up the quartet? Aunt Petunia Driscoll for the entertainment committee! You've always wanted a Victrola, and she's guaranteed to play a continuous record without changing needles or running down. Not one of them specially wanted by anybody, so let's be their folks for Christmas. I'll harness up Balaam in the old big pung and collect them. Is it a go?"

Mother took to the idea like a cow to clover and nodded her head like a sprightly automatic dummy.

"You are the beatinest for clever notions. I'll cook all the children's favorite dishes, but we'll have these others for Larry's sake. You are a comfort, John, sometimes."

"Oh, I'll admit that I have my p'ints," laughed Father, as he rose to wind the clock. "Now let's hustle to bed, for we've a good day's work ahead of us.

* * *

From the late train on Christmas Eve alighted a group which made the village Jehu hurry in that direction like a hound on the scent.

"Ahoy, Friend Eben!" cried a tall khaki-clad figure, "here's the whole Porter outfit, root and branch. Can you manage the eight of us, not bothering to mention two kidlets?"

"I snum!" gasped Eben. "Larry Porter, or I'm a sinner. Gosh! won't your Ma be tickled. Thought she was lookin' a mite peaked when she told me none of you wa'n't comin.' This 'pears to be some supprise party."

"You said it," approved Larry, "and this is my war trophy," as he drew his wife into the circle of light.

"Gosh!" repeated Eben, after a grave inspection, as he swallowed her hand in the grasp of his big mittened paw; "guess ye had the pick of the lot, didn't ye? Now ain't it lucky that I'm here? I never come to the 11.40, but was jest gittin' home from takin' a load of ma'sh hay over to Apple River, and had a forerunnin' to stop and see if I was wanted. I've got the bob-sleds, so I reckon ye can all stow in 'thout overlappin' too much, unless that baggage is a playin' planner or portyble bunglow."

As they sighted the old homestead nestling among the maples, a hush fell on the merry party. The queen of night rode in stately grandeur

among her starry retinue, and all things seemed to speak of peace on earth.

Larry's throat tightened. "East, west, home's best, little Scout. Now I know a cat's state of mind when it purrs."

Muriel squeezed his arm in joyful anticipation as she whispered back, "They will surely love me for your sake, won't they, Larry?"

"A little bit," he teased, "but a whopping big lot for your own."

And the others all wondered why they had counted as a sacrifice this undertaking which gave them such a feeling of unalloyed satisfaction with themselves.

"Now, Eben, drive slowly so the bells won't wake them, and I'll get the lay of the land," and Larry singled out the latchkey that had seemed a sacred talisman thru that bitter time of war, and the still longer one of waiting. In a jiffy he was back.

"All O. K. Toasty warm, and I've made a light, and there's a big grandfather tree cut, by the woodshed. Stage all set for first curtain rising."

Amid smothered laughter the transfer was made, and Eben drove quietly away with a warm spot in his heart, and a warmer one in his palm, from its contact with the most generous fare he had ever received. He surreptitiously poked his pocket to see if it still crackled, and then, out of hearing, put the ancient Pompey and Nance thru a pace that astonished even themselves, chortling to think of the surprise so providentially furnished for his "old lady's" stocking.

Some time during the wee small hours Mrs. Portor awoke sudenly, and pricked up her ears. Footsteps outside! Father received a nudge that made him spring up like a jack-in-a-box.

"Sh! some one walking," she warned. "I hung the turkey in the woodshed to keep cold, and don't believe I locked the door. S'pose it got stole and Benny had to be disappointed again, for it's my last one, you know."

"Guess you was dreaming, Ma," said the old man, going to the window. "No, by cracky, there goes two of 'em past the porch!" and he scrambled into his clothes.

Thump! from the room below. "Inside too!" gasped Mother. "You shan't go alone, John—'tain't safe," and she reached for her dress.

"Don't know as you're much protection. If they eat us, they'll take you first," he chaffed, but she was close at his heels when he reached the stairway, and listened. Strange sounds, verily, for desperate housebreakers.

"Guy, pile Father's books under the tree, and straighten the Christmas angel. Richard, slip into the bedroom and see if the babies are tucked in. Rob, if you dare to go snooping in that pantry again before we finish here, I'll shoot you for a deserter at sunrise!"

"What under the canopy—" breathed Mother, then forging ahead like a fire horse at the call of the gong, she burst thru the door, leaving Father and his lame knee on the last lap.

"Pussy is out of the bag!" shouted Dr. Meredith, emerging from the forbidden joys of the pantry, with each forefinger hooked into a sugared doughnut. "Christmas greetings, both. Mother, where in the name of this and that, have you put the cookie jar that belongs on the third shelf?" And they found themselves inside the charmed circle of love.

Such greetings! Such a tree! Such interesting beribboned packages! Such boys and girls, who had cast at least a dozen years behind them! At one side the gleaming rosewood of a Victrola caught and reflected the rays from the lamp, while in a cushioned basket, a white Angora kitten blinked wonderingly at the happy din.

Simultaneously from the adjoining room appeared twin cherubim, disguised in pink pajamas, who rubbed fists into sleepy eyes, and inquired like a Voice and its Echo, "Ish Kittmuth kum?"

So irresistible was the vision that Grandma threw caution to the elements, and swooping down upon them, showered kisses impartially on their little fat necks. Her eyes gloated over the happy scene, then misted.

"If Larrykins could only be here," she yearned, and oh, the miracle! In the outer dorway stood he and Muriel, with eyes and cheeks glowing over armfuls of red berries.

"It's Herself!" cried the big lad and then the two oldest and the two youngest just naturally gravitated into each other's arms.

When the first glad raptures had subsided, Mother couldn't help expressing a wonder that it had fallen to her happy lot to have a so much finer brand of child [illegible] than most people's.

In Good Hands

"Isn't it lucky that I got everything ready on account of your select party, Pa? But they shall come just the same, bless their hearts. I feel as if I had enough to share with the whole world."

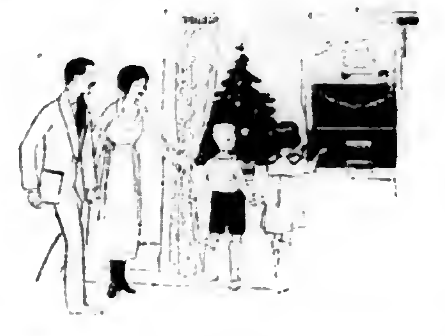
Somebody slipped over to the Victrola, and Gluck's heart-stirring voice filled the room like a benediction with the strains of "Home, Sweet Home." Mother's face was glorified, and in the hush that followed, her children waited expectantly for her to supplement the song with her favorite Doxology. But instead she did a most amazing thing, and lapsed into fervent, time-worn slang.

"Oh boy!" she cried, "Isnt' this sure some Christmas? I'll tell the world it is!"

And out in the blue heavens the morning stars sang together that golden chant which the angels led on that Yuletide so long ago, of Glory to God in the Highest, and Good Will to every man.

The more I see of rich men and the closer my insight into the workings of their [illegible] hearts, the more strongly convinced do I become that great wealth is no passport to happiness, nor proof of true success.

There is a better market for smiles than [illegible].



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The full rich tone and responsive touch of the Weaver lends itself alike to moods of joy and to moods of humility, and thanksgiving.

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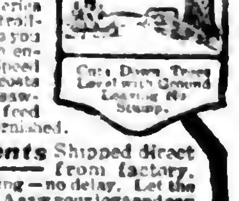

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Railroad men live with one eye on the dials of their watches, making every effort to have trains leave and arrive on time. Conductors and engineers *must* carry reliable and accurate timepieces.

Farmers, also, are relying more and more on the Hamilton—"The Watch of Railroad Accuracy." On the farm, exact time may not be a matter of life or danger; but there is no place where time counts more than on the farm.

Engineer Frank R. Lippincott pilots the "Twentieth Century Limited" out of Chicago on its first lap to New York. Engineer Lippincott is a veteran of forty years, and has been a pilot of the "Century" since that famous train was first inaugurated. He carries a Hamilton and has done so for ten years.

Hamilton Watch

"The Watch of Railroad Accuracy"

And why shouldn't you have a Hamilton? It would cost you no more, and the farmer who carries reliable time can plan his busy day as a railroad chief plans his train schedule. There is deep personal satisfaction, moreover, in precision and accuracy.

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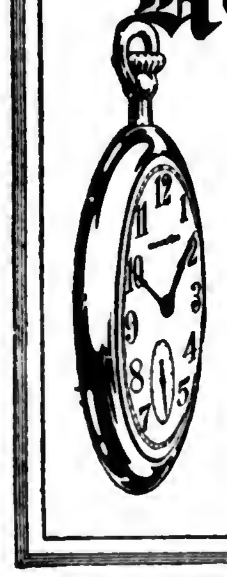
Shall we send you "The Timekeeper"—our booklet? "The Timekeeper" tells how to care for a fine watch. The different Hamiltons are illustrated and prices given.

HAMILTON WATCH COMPANY
Lancaster, Pennsylvania



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Made to your order from Horse, Cow, Calf, or any hide or skin with hair or fur on it.

You save as high as 30% by using your own furs.

Free catalogue with instructions for handling furs. Fur garments repaired and remodeled.

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"Let the hair go with the hide"

Large and small game, birds and fish mounted. Prompt service, expert attention. Price quoted is price charged.

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655-T West Avenue Rochester, N. Y.

LET US TAN YOUR HIDE.

Horse or Cow hide, Calf or other skins with hair or fur on, and make them into coats (for men and women), robes, rugs or gloves when so ordered. **Your fur goods will cost you less than to buy them and be worth more.**

Our illustrated catalog tells how to take off and care for hides, how and when we pay the freight both ways; about **our safe dyeing process** on cow and horse hide, calf and other skins; about the fur goods and game trophies we sell, taxidermy, etc.

Then we have recently got out another we call **our Fashion Book,** wholly devoted to fashion plates of muffs, neckwear and other fine fur garments, with **tanning and making charges.** Also fur garments remodeled and repaired.

For Fox, Raccoon and smaller skins, the Fashion Book is all you need. Catalog is for big stuff.

You can have either book by sending your correct address **naming which,** or both books if you need both. Address

The Crosby Frisian Fur Company,
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$22.00 FOR THIS FINE FUR COAT

Made-to-order from your own cow or horse hide to your own measure. We tan and manufacture the raw hide into a warm serviceable coat for this small charge.

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We make up any kind of skin to suit your individual desire—

Also Ladies Coats and Furs, Auto Robes, Etc.

We have been leaders in the tanning business since 1878 and guarantee satisfaction.

FREE Book of styles of Men's and Women's Furs. *Write for it today*

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Best results from large spready cow hides for

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Trade with your hide buyer. Get a black hide. We make

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RAW FURS

We pay highest market prices, guarantee honest assortment and make immediate returns.

Established 33 years in New York. Capital surplus and resources over $5,000,000.

Reference: Any bank or banker in U. S. A.

Write for [illegible]

Albert Herskovits & Son
44-50 W 28th St New York

POMONA GRANGE OF LANCASTER COUNTY, PA.

The regular quarterly meeting of Pomona Grange No. 71 was held in the Ephrata Band Hall on Tuesday. Nov. 23, beginning at 10 A. M. About 200 members from the six Lancaster county local granges were present.

Routine business only was transacted during the morning session.

At the opening of the afternoon session the Committee on Resolutions, which consisted of Samuel B. Givler, of Ephrata Grange, J. W. Bruckart, Warwick, H. N. Robinson, Salisbury, W. P. Bolton and F. C. Bicknell, of Fulton, reported the following resolutions which were adopted:

Resolved that this, Pomona Grange, hereby expresses its appreciation of the manner in which they are entertained by the Ephrata Grange.

Resolved that Lancaster Co. Pomona Grange asks the Penna. Legislature at its coming session to repeal the Brooks High License Law, and enact such laws that will harmonize with the Volstead Enforcement Act.

Resolved that the Pomona Grange appreciates the prompt service rendered by the State Police in their suppression of vice, the theft of automobiles and the control of speed fiends.

We also recommend that the state withhold licenses from proven reckless drivers. Also that no licenses be issued to persons of seriously defective sight.

Robert Webster, Lycoming Co., Pa. Prize Winner in Pig Club Contest

Resolved that the Lancaster Co. Pomona Grange asks the Penna. Legislature to show leniency to the thrashermen of the state in regard to their license fees, owing to their being a necessity to the labor of the farm.

Resolved that the Legislature of Penna., or the State Board of Education, takes such steps as allow the Grange Educational Plan as stated heretofore be tried out by various townships if demanded.

An address of welcome was made by L. Ruppin of Ephrata Grange. The response was given by Rev. George Shea of Bart.

In one of the official reports it was brought out Fulton Grange has 161 members, Ephrata 132, Salisbury 86, Warwick 83. Kirkwood not reported.

The question, "Why Should Farmers' Wives Be Thankful?" was ably answered by Mrs. Baltz, Mrs. Evans and Mrs. W. F. McSparran.

In the evening class of 48 candidates from the following local granges took the fifth degree: Ephrata 29, Warwick 9, Bart 3, Salisbury 3, Colerain 2, Fulton 1, Kirkwood 1. Among the candidates initiated were three ministers.

The next meeting of the Lancaster County Pomona Grange will be held in Lancaster city next February.

HIS DECISION

I have read the articles in answer to my qeustion: "Can I Start Farming?" The last article is very discouraging—that is, if I believed all the writer wrote. It may be the case in that locality; not so here in old Westmoreland County, Pa.

True, there are many farmers raling out because they cannot get help, but not because anything is a drug on the market. Prices are dropping on almost everything. It makes me happy that things that I need are getting cheaper.

I have had some excellent offers from readers of these columns. I thank them and am very sorry that I am unable to accept any of them. I am not seeking a place now.

Opportunity is knocking at my door. She is knocking hard. She whispers to me saying, "Start her up, son, and stick to it. You know how and you can do it. Start at the bottom and climb. Take your time. Help some old man whose son has disappointed him by going to the city. Let the old gentleman furnish the money and land. You furnish the muscle and brains and season it with pep."

I can see into the distant future. Farmers are quitting. The population is increasing. People eat farm products to live. The day is near when they will pay, and pay well for what they eat.

I am going to get into the game and reap a double harvest. First, the harvest from Mother Earth. Second, the harvest from my city cousins' purse. I can farm for a living and for a home. I can farm for pleasure and profit with independence and satisfaction.—A Reader, Westmoreland Co., Pa.

LIBERALITY IMPROVES SCHOOL

Owing to agitation within the past eight months by the mothers of several school districts, the little school at McLean, N. Y., our natural center, has been metaomorphosed in the service it is giving its patrons, merely because public opinion made it possible for the school board to dare to pay the principal $2000 a year, making sure they had a man fitted to earn it. And they also hired only professionally trained teachers in the other two rooms. You cannot realize what a change there is in the work of the school! Now several parents in nearby districts find it worth while to send their children in to McLean, even though they have to pay tuition while still paying taxes to maintain the usual poor school in the districts. This last is because we haven't been able as yet to get the districts to see it as their best procedure to close the district schools. Send all the children in to McLean and have a really good big school. But its coming! In our own district, due to the increased help from the state, we are paying an untrained teacher $24 a week to teach three little boys. An obvious misuse of public funds. It should be impossible to legally hire such teachers.—F. G. M.

Keep a record of all the kindness you receive. It may make you ashamed of yourself.

Don't trust strangers with more than you can afford to lose.

---

up 92 per cent of her farmers and Hopewell 89½ per cent of hers. Tuesday's canvas resulted in a 90½ per cent membership, which on a percentage basis surpasses Monmouth County.

"GOOD WILL" CANNOT BE STOLEN

You cannot steal "good will" and get away with it. That has been made clear in a sweeping decision of the Federal Court which gives to honest business a protection against unfair competition that it never had before. This ruling, which is of vital importance to every line of business in the country, was handed down by Judge Woodruff, of the District Court of Omaha, after a trial which lasted two weeks. It was in the case of a spark plug company, against another company, in which the plaintiff sought to restrain the defendant from manufacturing an imitation of the plaintiff's spark plug and insulator core. It was in restraining the defendant from further manufacturing of these imitation articles that Judge Woodruff gave the ruling that is destined to safeguard business and protect the "good will" interests in every line of commercial endeavor.

NATIONAL ASSOCIATION OF FARMERS PERFECTED

Realizing the need of co-operative effort to produce and market foodstuffs efficiently, the farmers of the United States are rapidly perfecting their National Association organized last spring as "The American Farm Bureau Federation."

The organization is a natural outgrowth of the county farm bureau movement begun in this country about a decade ago. The County Agricultural agents employed by the farm bureaus, or the county boards of agriculture as they are known in New Jersey, have become an established institution in the agricultural world, and have been a big factor in putting American agriculture on the map. Under their leadership the farmers have been building up strong county organizations. The farmers have realized, however, that there must be unified action between counties in order to meet the big agricultural problems of the day, so state federations of the county bodies were organized in a number of states to look after state-wide interests.

Carrying the idea further, in order to give the farmers a voice in national affairs, representatives of 28 state federations met at Chicago and organized the American Farm Bureau Federation, March 4, 1920. Other states have since stepped in line, so that now the Federation represents about 1000 counties and more than 1,250,000 members. This winter the various states are undertaking membership drives which are expected to bring up the enrollment to fully four million.

In New Jersey a joint membership drive has just begun by the County Board of Agriculture, the State Council of County Boards and the National Federation. A single fee admits to membership in all three organizations. This week the campaign was begun in Monmouth Co. and the next week it will be carried over into Mercer. Dr. Frany App, secretary of the State Council, is directing the drive.

Good times for all can only be the product of good work by all.

Honking your horn so much does not help so much as steering wisely.

Make Note of this big Exposition

Here is something that no progressive farmer can possibly afford to miss. It marks the greatest forward stride in educational exhibits ever undertaken.

6TH NATIONAL TRACTOR SHOW & Educational Exposition FEB. 7 to 12 Write for FREE Admission Tickets Columbus, Ohio

Your best chance to inspect and judge all types of power farming machinery.

MAKE no mistake. This Sixth Annual National Tractor Show is not just a tractor demonstration. It is a gathering of the leading men in agriculture and *all* men interested in mechanical power as applied to farming. They will get together at Columbus, Ohio this February, for the exchange of new and profitable ideas.

A wonderful program has been arranged. Eight huge buildings will be devoted to power farming equipment, demonstrations, lectures, meetings and entertainments that are free to all who come.

Tractors of every size and type, together with tractor drawn and operated tools of many kinds, will be combined in an exhibit of enormous instructive value. New and highly interesting machines and methods without number will be shown. Successfully tried out ideas, startling in the results they obtain, will be demonstrated for the first time. Valuable knowledge will be gained by every farmer--practical facts that can at once be turned into real profit.

Could You Say That You Wouldn't Want to Be Here?

You can take it for granted that you will have a good time. There will be plenty of fun. But, far more important is the big list of famous men and practical successful farmers who will be here to go into the problems and possibilities that confront you in your work.

There will be lectures by men who know agriculture as a wonderful science and by men who know it as a bread and butter earning business.

The most famous speakers, nation-wide celebrities--the men you have always wanted to meet--will be there. And for the women, too, will be a program to keep them busy and interested every minute.

Hundreds of different tractors, tractor-drawn and power operated tools, farm-lighting plants, etc., will form the most tremendous display ever witnessed.

Of course you want to come! Of course it will pay! Use the coupon now to obtain more complete information and insure free admittance.

Note the Coupon

The coupon below will bring you a special ticket for Free Admission along with a booklet explaining the full instructive and entertaining program. So fill it out, and mail it.

The Sixth Annual NATIONAL TRACTOR SHOW And Educational Exposition

Arrange your plans now to come and bring your wife and family. Ample accomodations are assured for one hundred thousand farmers who will attend. Columbus, the country's most central city, bids you welcome.

COLUMBUS, OHIO Feb. 7-8-9 10-11 and 12

National Tractor Show Committee
Columbus, Ohio

Gentlemen:-
Please send me your booklet regarding The Sixth Annual National Tractor Show. Also enclose free tickets for myself and ____ others of my family.

Name ____
Street or R. F. D. ____
City ____ State ____

Markets

PHILADELPHIA PRODUCE

—Dec. 6, 1920.

It is more evident that there is a tendency of ten price values on practically all lines of fruits and vegetables is downward. Not only in the staples such as potatoes, onions, cabbage, turnips, etc., but it also prevails in the various lines of fruits and vegetables. Vegetable supplies have been very plentiful as well as seasonable fruits, in fact so great an oversupply, especially in potatoes and cabbage. An embargo that was placed against the shipping of these commodities to Philadelphia, was raised here this morning, so that now fruits and vegetables can be shipped to Philadelphia over the Phila and Reading Railroad.

Vegetables—Beets, 3@5c bch., or 40@50c ⅝ bskt.; brussel sprouts, 12@18c qt.; cabbage, all the way from $5 to $13 ton; strictly fancy fresh cabbage $15@16 ton or better. Carrots, $1.50 cwt N. Y. state; and 40@50c ⅝ bskt. for nearbys; cauliflower, $1.25@2 crate; N. Y. state celery, $2.50@4 crate unwashed, 65@85c bch washed nearby celery, 5@20c bch.; onions, yellow, 90c@$1.50 sack, $1.50@1.75 No. 1 whites; picklers, $3@4 sack; mushrooms, 75c@$1.75 No. 3 bskt. Parsnips, 50@65c ⅝ bskt. Parsley, 50c@$2.50 hmpr., very poor and not wanted at all. Potatoes which were in heavy accumulation, and show the effects of standing on track for several days. Prices lower, mostly $1.40@1.65 cwt on ordinary stock, fancy at $1.65@1.85 extra fancy Penna., $1.90@2.10 cwt. White turnips, 25@50c bskt.; yellow turnips, 50@75c ⅝-bskt. Aberdeen turnips, 25@40c ⅝-bskt. Spinach, $1.75@2 bbl., 40@50c ⅝ bskt. Sweet potatoes, $1.75@2.25 bbl., $1.40@1.50 hamper, 65c@$1.25 nearby ⅝ bskt.; yams, $3@4 bbl.; water cress, $2.50@3 100 bches.

Fruits—The various varieties of apples sold here this morning the following prices: Per bbl. Baldwins, $3@5; Greenings, $3.75@4.50; Kings, $3.50@5.50; Grimes Golden, $[illegible]; York Imperial, $2@4.50; Twenty-ounce, $4.50@4.75; Rome Beauty, $4@6; Stayman Winesap, $4@6; Tallman Sweets, $[illegible]; Black Twigs, $4@4.50; Sparks, $3.50@4.50; Gillflower, $4.50@5.50. Per bushel Baldwins, 65c@$1.25; Spys, 65c@$1.25; Hubbardsons, 90c@$1.25; Russets, [illegible]; Kings, $1; Wagners, $1; McIntosh, $1.25; Bulk apples, $1@2 cwt.

There were two cars of pears sold at [illegible] prices. Per bbl. Kieffers, $3@5; [illegible] Sheldons, $8; Clairgeaus, [illegible]. Cranberries are ruling firm at high prices, as follows: Bbl. $10@16; ½ bbl box [illegible]; [illegible] crate, $2.50@4.50.

Poultry—There was no change this morning in the live poultry market which is steady with the same prices of last week's prevailing. Fowls heavy, $28@30c; medium 26@27c; small, 21@24; Leghorn fowls, 21@23c lb.; spring chickens fancy, 25@28c; ordinary, 22@24c; Leghorn spring chickens, 22@23c; turkeys, 35@48c; ducks, 21@30c; geese, 27@30c. Dressed poultry is also showing very little change, selling about as follows: Nearby turkeys, 55@60c; western turkeys, 45@55; fowls, 28@36; roasting chickens, 31@37; broilers, 41@47; ducks, 35@40c; geese, 30@32c.

Eggs—Eggs are soaring in price and the market took a sharp advance here this morning of $3 dozen and are quotable as follows: Penna. nearby fancy selected, 98@99c doz.; Penna. and other nearby firsts, 87@89c doz., with current receipts at 85c doz.; western eggs at 82@85c doz. for firsts, with extra firsts at 87@89c doz.

LANCASTER PRODUCE

—Dec. 4, 1920.

The first Christmas greens of the season arrived in small quantities on market this morning. A few country-grown cedar trees sold at 50 and 60 cents. Holly from the county sold for 15c a bunch. The market was well attended and was marked by a plentiful supply of eggs and dressed chicken. The quotations:

Butter and eggs—Country butter 65@75c lb.; creamery butter 75c lb.; fresh eggs, 90c dozen; duck eggs, 95c per dozen; goose eggs 8@10c each.

Poultry—Chickens, $2@2.25; ducks, $2.25@2.50; roosters, 75c@$1.75; squabs, 50@75c.

Vegetables—Parsnips, 10c box; spinach, 20c ½ pk.; turnips, 3c ½ pk.; peppers, [illegible]; cucumbers, 5c ea.; potatoes, 20c ½ pk., $1.20@1.25 bu.; sweet potatoes, 30c ½ pk.; cabbage, 5c head; cauliflower, 15@20c head; lima beans, 25c pint; onions, 10c box; red beets, 5c bunch; beans, 30c ½ pk.; rhubarb, 3@5c bunch; tomatoes, 10@15c box.

Fruit—Apples, 15@20c ½ pk.; pears, 25c ½ pk.

Miscellaneous—Cider, 40c gallon; hominy [illegible]; scrapple, 16c lb.

NEW YORK PRODUCE

—Dec. 4, 1920.

Butter weak; receipts, 3770; creamery, higher than extras, 52@52½c; extras (92 score), 51c; firsts, 90 to 91 score), 48@50c; packing stock, dull and weak.

Eggs steady; receipts, 5571; fresh gathered extra firsts, 83@86c; firsts, 78@82c; state, Penna. and nearby western hennery whites, firsts to extras, $1.06@1.08; nearby hennery browns, extras, 90@93c; do gathered and mixed colors, firsts to extras, 95c@$1.05; refrigerator firsts to finest, 59@66c.

Cheese irregular; receipts, 3683; state whole milk flats, held specials, 28@28½c; do average run, 24½@25c; state, whole milk flats, fresh, specials, 25@25½c; do average run, 23½@24c.

Vegetables—Potatoes in free supply and selling very slowly, with tone weak and outside quotations extreme. Sweet potatoes in light receipt and Eastern Shore advanced to $1.25@1.65. Potatoes, state, bag, $2.75@3.25; L. I. bbl., $4@4.50; southern, bbl $2.50@3; sweets, Jy. 1s bskt., $1.50@1.85; Jy. 2s bskt. 75c@$1.25; beets, nearby, bbl. $2@3; nearby bag, $2@2.50; nearby, bskt. 75c@$1; cabbages, bbl. $1@1.50; 100, $1.25; Dom. not, $13@16 ton; Dom. red bbl, $1.25; onions, state and Wisconsin, red, 75c@$1.50; pumpkins, cheese, $2; parsnips, bbl. or bag, $2.50@3; parsley, nearby, 100, $1@2; nearby, bskt. 50@75c; Balt., bskt., 50@75c.

Fresh Fruits—Apples, bskts. fancy, $1.25 bbl. York Imp., $3.50@4.75; S. Winesap, $4.50@5; Baldwin, $4@5; N. Spy, $3@4.50; Jonathan, $4@6; 20-Ounce, $2.50@5; Greening, $3@5; Delicious, $2.25@4.25; pears, bbls. Keiffer, $2.50@3; Lawrence, $4@5; Seckel, $6@9; cranberries, E blk. bbl., $9@11; grapes, state, Cat'ba, 90c; Concord, bskt., $1.25@1.50; Colmar grapes, imported, lb., 50c; Avocada pears, Fla. fancy, box, $15@18.

PITTSBURGH PRODUCE

—Dec. 4, 1920.

Vegetables—Potatoes, Mich., sack, $3@3.25; do bulk, per 100 lbs., $1.75@2; sweet potatoes, hmpr. $2.25@2.50, beans, wax and green, Fla. hamper, $3@4; onions, Spanish, crate, $1.65@1.75; do h. g., 100-lb. sack, $1.25@1.40; cabbage, h. g. bbl, $1.50@1.75; cauliflower, Cal. crate, $1.75@2; brussels sprouts, qt., 25@30c, artichokes, doz., $2.25; turnips, bu. $1.50@2, garlic, lb., 25@30c; parsley, doz. 50@75c; radishes, doz. 25@50c; tomatoes, Ashtabula, h. h., bskt., $2.75@3.25; eggplants, Fla., hamper, $5@5.50; mushrooms, bskt., $1.50@1.75; carrots, bu. $1.25@1.50; celery, bch., 40c@$1; Pepper, Fla., crate, $5@5.50; parsnips, bu., $1.25@1.50.

Butter—Prints, 57@57½c; tubs, 56½@57c, cooking, 45@50c, Ohio, 52½@53½c.

Cheese—N. Y. full cream, 31@32c, Wis. Swiss, 49@50c; do 20-lb. block, 31@32c; Swiss 5-lb. brick, 33@34c; Longhorns, 31@32c; Limburger, 1-lb., 34c, do 2-lb., 33c.

Eggs—Fresh select, 85@90c; current receipts, 76@80c; candled storage, 65@68c, do at mark, 60@62c.

Fruits—Apples, bu., $1.50@2; do bbl., $4@7, do Washington box, $2@2.50; figs, box, $2@4.50; cranberries, $15@16; do box, $7.50@8, cocoanuts, box, $4.50; grapes, Almeria, Spanish, keg, $6@15; do Emperor, Cal. keg, $7.50@8; Cassaba melons, box, $2@2.50; peanuts, Jumbo, lb., 15½@16c; walnuts, black, lb., 4@4½c; do English, lb., 25@28c; mixed nuts, box, $5@5.25.

BALTIMORE PRODUCE

—Dec. 4, 1920.

Vegetables—Quotations are as follows. Beets, native, bch., 4@5c, brussel sprouts, New York, qt., 10@15c, cabbage, N. Y., domestic, per ton, $12@14, carrots, bunch, 4@5c; do N. Y., 100-lb. sack, $1.50@1.75, cauliflower, Eastern Shore, Md., per bbl., $4@5, do, Cal. and L. I., flat crate, $2.25@2.50; celery, N. Y., washed, bunch, 50@90c; do rough, standard crate, $4@5; do, two thirds crate, $3@4; do native bunch, 6@8c; horseradish, native bu., $5@6, onions, Western Maryland and Penna. yellow, 100 lbs. $1.25@1.50; do Eastern Shore (Md.) 1@1¼c, Western, white, per 100 lbs., $1.25@1.75, do N. Y. and Western yellow do, $1.25@1.50, oyster plants, native, bunch, 6@8c, parsnips, native, bu., 90c@$1, peppers, Fla., crate, $4@5, pumpkins, each, 15@30c, savoy cabbage, native per bu. bskt., 50@65c, spinach, native, bu. 50@60c, turnips, native, per 4-8 bskt, 30@35c.

Potatoes—West Maryland and Pennsylvania No. 1 100 lbs., $1.65@1.75, New York and N. J., No. 1 do, $1.65@1.75 native or nearby No. 1 do $1.50@1.75, Eastern Shore Md. and Va. cobblers, $1.50@1.65, McCormicks do $1.25@1.40; So. Maryland do, $1.40@1.50; all sections No. 2, do, 50@75c, all sections, No. 1, 150-lb. sack, $2.50@2.75; sweets—N. Carolina No. 1 per bbl., $2.50@3, Eastern Shore Md. and Va., No. 1 do, $2.50@3; Rapp-Potomac, do $2.50@3; yams, all sections No. 1 bbl., $2.50@3; sweets and yams, culls, No. 2, $1.50; all sections, per bu. hamper, 75c@$1; sweets and yams, kiln dried, bbl., $3.50@4.50; bu. hamper, $1@1.50.

Eggs—Maryland, Penna. and nearly firsts, 76@77c. Western firsts, 78c, W. Va. firsts, 76c; Southern firsts, 74c.

LIVESTOCK MARKETS

—Dec. 4, 1920.

NEW YORK

Cattle, receipts, 80; no trading. **Calves**, receipts, 2200; weak; veals, $11@17, culls, $9@10; no trading in grassers or westerns.

Sheep and Lambs—Receipts, 2575, weak; sheep (ewes), $4.50@5.50; culls, $2@3; yearlings, $7@9; lambs, $10.50@13.75; culls, $8@9.

Hogs—Receipts, 3985, steady at $11.50; little pigs under 70 lbs., $10.50@11, roughs, $9.50.

EAST BUFFALO.

Cattle—Receipts, 500, dull.

Calves—Receipts, 175, 50c lower, at $4@15.50.

Hogs—Receipts, 4000, slow, $15@25c lower; heavy, $10.75, mixed yorkers, light do and pigs, $10.75@10.85, roughs, $9.25@9.50, stags, $7@8.

Sheep and Lambs—Receipts, 2400; slow, steady to 50c lower; lambs, $6@13.25; yearlings, $6.50@9.50, wethers, $6@6.50; ewes, $2@5.50; mixed sheep, $5.50@6.

PITTSBURGH

Hogs, receipts, 5000, market active, 10 to heavies, $10.75@11, heavy and light yorkers and pigs, $11@11.25.

Sheep and Lambs—Receipts, 300, market steady, top sheep, $6.50; top lambs, $13, lower.

Calves—Receipts, 50 market lower; top, $16.

CHICAGO

Hogs, receipts, 5000; market activei, 10 to 15c higher than yesterday's average, closing strong. Bulk of sales, $10.15 to $10.35; top $10.40; heavy weights, $10.15 to $10.40. Medium weight, $10.20 to $10.40; light weights, $10.15 to $10.35; light lights, $9.90 to $10.15; heavy packing sows, smooth, $9.65@$10; rough, $9.40@9.65; pigs, $9.25@$10.25.

Cattle, receipts, 3000; compared with a week ago, most grades of native beef steers irregularly, $1 to $3 lower, medium and good corn feds declining most; butcher cows and heifers and canners and cutters around steady; bulls steady to lower; veal calves, $1 to $1.50 lower; stockers and feeders, 25 to 50c lower; western steers, 50c to $1 lower.

Sheep, receipts, 1500; compared with a week ago, fat lambs and yoarlings, $1 to $1.25 higher; matured sheep, 50 to 75c higher; feeds steady.

PHILADELPHIA LIVESTOCK

—Dec. 4, 1920.

Receipts for week ended December 4.

	Cattle.	Sheep & lambs	hog.
Totals for week.........	1869	4434	8367
Previous week	3826	8146	14680

Calves—Receipts of calves were 1219, as against 2469 the previous week.

Beef Cattle—There was little inquiry in the market for steers and cows and prices were lower. Supplies were in excess of requirements. Veal of desirable quality ruled steady, with demand absorbing the offerings of this description. Quotations: Steers, good to choice, $10.00@12.50; fair to good, $9@10.50; common to fair, $8@9; cows western, good to choice, 6½@7½c; do fair to good, 5½@6½c; bulls, 4½@7c; calves, extra to choice, $16.50@17; fair to good, $14@15; common, $10@12; Tennessee, $14@15; other southerns, $7@11.

Sheep and Lambs—Offerings of sheep were moderate, and the market ruled steady with a fair demand for fine stock. Lambs were firm and higher, with demand readily absorbing the limited offerings of choice stock. Quotations: Sheared sheep, wethers, extra, $7@7.50; do good to choice, $6@6.50; medium, $5@5.50; do, common, $2@3; ewes, heavy, fat, $5@5.50; lambs, spring choice, West Virginia, $14@14.25; choice, Penna., $13.75@14, medium, $11@13, common, $9@11.

Hogs—Nearby stock was quiet and easier. Western hogs sold slowly at former rates. We quote: Best western, $14; nearby, good $11@11.50.

City Dressed Stock—Steers, heifers and cows were weak and lower under a light demand, liberal supplies and more general pressure to sell. Veal of desirable quality was in fair demand and steady. Lamb was firm and higher, with supplies well cleared up. Hogs were dull and easier. We quote: Steers, 14@22c; heifers, 12@16c; cows, 10@12c, calves, city dressed, choice, 28@30c, calves, country dressed, 26@28c; lambs, spring, choice, 27@29c; sheep, 10@16c, hogs, 18@19c.

NEW YORK HAY AND GRAIN

—Dec. 4, 1920.

Feed.—The market for mill feed was very inactive and the sharp reductions which have recently been made in values failed to attract much new business. Mills were anxious to find buyers but consumers were little disposed to make more than very moderate purchases.

Quotations: City feed bran, $37, middling, $37 in 100-lb. sacks, red dog, $55, nominal, in 100-lb. sacks; Western spring bran, $35.50, standard middling, $34.50, flour middling, $45; red dog, $55, all in 100-pound sacks, 30 day shipment. Oat feed, $18, rye middlings, $35; white hominy feed, $41; all in 100-pound sacks. Cottonseed oil meal, $41.50; linseed oil meal, $46, in 100-pound sacks.

Hay and Straw.—There were 84 cars in yard at 33d street shed Saturday morning, trade is fairly active and market is steady to firm; with prices showing advance on mest qualities, and occasional high grade cars are held even higher than we quote. Rye straw steady. Oat and wheat straw dull.

Hay, large bales, Timothy, No. 1, $38, No. 2, $34@36, No. 3, $29@32, shipping, $27@29, no grade, $16@24, clover mixed, fancy, $35@37; No. 1, $31@33, No. 2, $27@30, hay, small bales, timothy, No. 1, $36, No. 2, $31@33, No. 3, $29@30, shipping $26@27; no grade, $16@22, clover, mixed fancy, $34@35, No. 1, $30@32, No. 2, $26@29; straw, large bales—No. 1 rye, $20@21, No. 1 oat, $16, bundled wheat, $13@14, tangled wheat, $12.

Wheat—No. 2 red c. i. f., $1.98. No. 2 hard winter, $1.98.

Corn—No. 2 yellow, $1.04¼. No. 2 white, $1.01¼.

Oats—No. 1 white 63c; No. 2 white, 63c, No. 3 white, 62c. Rye, c. i. f., $1.72. Barley, c. i. f., malting, 97c@$1.00; feeding, 86@92c.

PHILADELPHIA DAIRY MARKET

—Dec. 4, 1920

Butter—Receipts, 1224 tubs. The market ruled weak and largely nominal at the late decline. Buyers were holding off, and transactions were entirely of a jobbing character. Quotations follow: Solid-packed creamery, fancy, high scoring goods, 56@58c, the latter for jobbing sales; extra, 55c; extra firsts, 53@54c; firsts, 44@51c; seconds, 35@42c. sweet creamery, choice to fancy, 57@59c; fair to good, 46@56c; ladle packed, as to quality, 32@34c; packing stock, 25@28c; fancy brands of nearby prints were jobbing at 64@66c; good to choice, 54@63c; fair to good, 51@53c.

Eggs—Receipts, 1788 cases. There was little trading, but values were steadily maintained on strictly fine fresh eggs, of which there were few available. Unattractive stock was weak to sell. We quote: Nearby firsts 82@84c doz.; nearby current receipts, 80c doz.; nearby ordinary to fair 70@76c; western extra firsts, 82@84c; firsts, 77@80c; inferior lots lower; jobbing sales of fancy candled fresh eggs, 93@94c; fair to choice, 85@92c.

Cheese quiet and barely steady. New York, whole-milk flats, fancy, held, 28@28½c; do fair to good, held, 25@27c; do fancy, fresh, 22@24c; longhorns held, 28½@29c; do fresh, 28@28½c; single dairies, held, 28@28½c; do, fresh, 26@27c; jobbing sales of fancy held goods, 30@31c.

PHILADELPHIA HAY AND GRAIN

—Dec. 4, 1920.

Baled Hay and Straw—Receipts, 108 tons of hay and 2 cars of straw. Quiet and prices favored buyers. Quotations follow: Timothy hay No. 1, none here; No. 2, $28@29; No. 3, $25@26; sample, $22@24; no grade, $18@20; clover-mixed hay, light mixed, $26@27; No. 1 mixed, $24@25; straw, No. 1 straight rye, $21@21.50; No. 2, $19.50@20; No. 1 tangled rye, $17.50@18.50; No. 2 do, $17@17.50; No. 1 wheat straw, $17@17.50; No. 2 do, $16@16.50.

Bran in light request and barely steady. We quote: Car lots, including sacks, soft winter bran, in 100-lb. sacks, per ton, $39@40.

Wheat—No. 2 red winter, $1.93@1.98; No. 2 red winter, garlicky, $1.82@1.87. Other grades were quoted at the following schedule of discount: Mixed wheat, 5c under No. 2; No. 3 wheat, 3c under No. 2; No. 4 wheat, 7c under No. 2; No. 5 wheat, 11c under No. 2.

Corn—$1.03@1.04 for No. 2 yellow.

Oats—No. 2 white, 62½@63c; No. 3 white, 61½@62c.

PITTSBURGH HAY AND GRAIN

—Dec. 4, 1920.

Receipts of hay during the beginning of the week were more than equal to the demand but has been disposed of at fair prices. Arrivals while not heavy are sufficient, we look for a stronger market within the next week or so. The continued mild weather is causing a depressive effect on same. Straw is a scarce commodity. All arrivals are bringing top prices. Would advise shipments. Oats, ear corn and shelled corn show a slightly better feeling. Arrivals light coupled with a better demand.

No. 1 timothy, $29.50@30; standard timothy, $27.50@28; No. 2 timothy, $[illegible]; No. 3 timothy, $23@24, No. 1 light clover mixed, $27@28; No. 2 clover mixed, $[illegible]@28; No. 2 clover mixed, $24@26; No. 1 clover, $27.50@28.50; No. 2 clover, $[illegible]@25; No. 1 oat straw, $16.50@17; No. 1 wheat straw, $16.50@17; No. 2 wheat straw, $16@16.50; No. 1 rye straw, $17@17.50; No. 2 rye straw, $16.50@17; No. 2 white oats, 56@56½c; No. 2 yellow shelled corn, 96@97c.

TOBACCO MARKET

—Dec. 6, 1920.

Tobacco growers and dealers were interested in the announcement that a tobacco sales floor, the first in the section, has been established under the name of Lancaster Tobacco Auction Sales Company. The same has been duly chartered and authorized to transact business in the above named city for the purpose of packing and selling leaf tobacco [illegible] public sales floor. The capital stock is $100,000 and it is stated that there were 175 subscribers for same. Mr. Christian Habecker has been elected president. The board of directors includes many who from time to time have been active in the betterment of tobacco market conditions.

The new organization will hold its first public sale on the 20th of the present month at which time there will also be a tobacco show, held in the main exhibition building at the local fair grounds. This is an important innovation in the tobacco line and is worthy of the attention of all growers of this section.

Meanwhile there was little activity in the matter of sales or inquiries from buyers, who as usual, were on the alert for the occasional grower who, thru circumstances or poor business judgment, can be induced to sell at a sacrifice, but fortunately these were few. It is said sales of this kind were around $20 and 6 per cent. All the larger growers refuse to sell at present prices and are awaiting the development of better markets and better methods and in the meantime the actual valuation of the present excellent tobacco crop will not be known as holders are still watchfully waiting, as every one who sells at present will lose money and also weaken the deservingly prospect of fair and satisfactory prices.

NEW YORK MILK MARKET

—Dec. 6, 1920.

The retail demand was fair last week and arrivals gradually diminishing. Surplus showed a marked decline and is now [illegible] more than normal for this time of year. The December rate for 3 per cent milk in the [illegible] mile zone is $3.18 per 100 lbs., add [illegible] per 100 lbs. for each one-tenth of 1 per cent extra butterfat.

Receipts of milk and cream in 40 quart cans for the week ending December 4, 1920, were as follows:

Railroad	Milk	Cream
Erie	[illegible]	[illegible]
Susquehanna	[illegible]	[illegible]
West Shore	[illegible]	[illegible]
Lackawanna	56744	[illegible]
New York Central (long haul)	172[illegible]	[illegible]
Ontario	4501[illegible]	[illegible]
Lehigh Valley	52259	[illegible]
New Haven	652	60
Pennsylvania	12120	398
Other sources	6000	[illegible]
Totals	414915	[illegible]
Same week last year.......	355452	[illegible]

INTERSTATE MILK PRICES

—Dec. 4, 1920

Philadelphia milk prices remain the same, two cents below the November price.

Farm Products Prices and Prospects

Our Business Letter

Improvement in Outlook Expected

The business outlook so far as it affects the markets for the farmers' products is by no means clarified but each week seems to bring a stronger undercurrent of confidence and optimism that the general depression will not become much worse before conditions begin to mend. Of course there are numerous points of strain and tension in the economic fabric at which ruptures may occur before relief arrives.

That there is a great need abroad for the products of American agriculture and industry is shown by the report on exports and imports into the United States during October. Exports were $146,000,000 greater than during September, altho the average prices for commodities had declined. Increases were most noticeable in grains, cotton and mineral oil, while exports of meats declined in quantity. Owing to the consumers' strike in this country, imports increased only $1,000,000 so that the excess of exports over imports was $430,000,000, the largest since June, 1919. Altho European needs are large, their financial conditions remain very unsatisfactory, and it is safe to infer that a large share of their recent purchases will not be paid for within the usual limits in such matters. Plans for exporting organizations under the Edge law are going forward, and one of these with a capitalization of $100,000,000 expects to be ready to function by the first of January. Congressional action may also add to the credit at the disposal of foreign countries so far as purchases in the United States are concerned.

Retail buying in this country continues under restraint and is an important factor in present low prices for cotton, wool, hides and wheat. However, the inactivity of mills and factories using such products for their raw material means that when consumptive buying again is renewed, a shortage may develop in the corresponding manufactured products for immediate delivery.

The money situation is becoming gradually easier, altho in the agricultural districts loans are not being liquidated at a very rapid rate. This is not due so much to a failure on the part of farmers to sell their crops, as has been frequently stated, but to the fact that the sale of a given quantity of cereals or live stock brings a much smaller cash return than was the case four months or more ago. Seventeen small banks in North Dakota have closed because of the inability or unwillingness of farmers to pay off their loans, altho political partisanship may have had something to do with the situation. One bank in Colorado also has been obliged to close its doors.

One of the most hopeful factors in the situation is an increased interest on the part of the public that the farmer should receive a square deal and that the prices of the things he sells should not come down farther than prices of the things which he must buy.

Hogs Are Higher

Hog producers decided to take their chances on a higher market after the sharp break late in November, the result being a slight curtailment in receipts at ten leading markets. Values were advanced about 50c. Dressed pork prices were sharply lower, the decline ranging from $7 to $10, presumably reflecting the appearance of the big hog run of the preceding week in the leading wholesale meat markets.

Liberal receipts of hogs can be expected for several months, altho not so large as during the last two years. This loss will be partially offset by the heavier aevrage weights which are now the rule due to the fact that the ratio of corn and hog prices shows a profit upon feeding out. Pigs and light hogs are very scarce. A repetition of breaks in prices can be expected from time to time, and it is quite likely that a point lower than that touched two weeks ago will be seen before the winter packing season is over. By the end of January if not before, Eastern shipping demand is expected to enlarge and will constitute a valuable support to western markets.

Cattle Are Moved Quickly and Easily by Truck

No Sign of a Wool Market

So far as the American grower is concerned, the wool market remains in parts unknown. Sales continue abroad, but values remain low and upon the kinds of wool which Middle Western growers produce must extensively, the tendency still seems to be downward. The fine combing wools, however, sell to fairly good advantage. American buyers are taking part of the offerings in the Australian auctions, the low rate of foreign exchange making possible the importation of wool into this country at a considerably lower figure than is normally the case. The latest report from that country states that some of the choicest Merinos were bought by American buyers as high as $1.28 clean landed basis. These were the best combing 64-70s and sterling exchange was figured at $3.45. Super 70s brought $1.15 to $1.25 clean landed basis, Boston. Choice warp 60s were bought to bring to this country for about 90c clean landed basis. Some South American wools which are of comparatively low grade have been purchased to bring to this country at extremely low prices.

Very little of the wool held by the state wool pools has thus far been sold.

Slight Recovery in Seed Markets

Since the low prices for seeds were largely due to a lack of confidence and to the sharp decline in all grain markets, a slight correction of these conditions produced a slight upturn in the market for timothy and clover seed. Growers are selling sparingly but seeds men will continue to buy only in small quantities as long as the outlook remains uncertain and money continues tight.

Prices on December 4th were as follows:

Toledo per bushel, 1919 prime red clover, $12.40; 1920 prime, $12.55; 1919 prime timothy, $3.35; 1920 prime timothy, $3.45; 1919 prime alsike, $16; 1920 prime alsike, $16.25.

Hay Prices Trend Downward

Increasing receipts with buyers remaining out of the market because of reduced requirements and prices which are high compared with concentrated feeds have resulted in a dull and draggy hay market. Heavy shipments are expected from the far west and also from the southwest.

A Slumpy Market for Feed Stuffs

Practically all kinds of by-product feedstuffs declined during the past week. Bran was marked down most severely. Fairly liberal stocks, with an increase in wheat feed production and continued absence of demand were the factors responsible.

Latest quotations per ton (100 lb. bags) in car lots are:

Chicago—Bran, $36; standard middlings, $36; flour middlings, $42, cotton seed meal 41 per cent., $42; cottonseed meal, 36 per cent., $37, gluten feed, $45; hominy feed, $42, old process oil meal, $54, tankage, $75.85.

Philadelphia—Bran, $35 to $37; standard middlings, $33 to $34; flour middlings, $46 to $48; red dog flour, $54 to $56.

Eggs Remain High

Poultry and egg prices hold at a profitable level. Values for the former were slightly easier the last week. The U. S. Bureau of Markets report receipts of eggs by cases at the four leading cities since January 1, 1920, to be 12,025,884 compared with 13,806,458 during the corresponding period of 1919. Receipts of poultry during the same period in 1920 were 159,490,012 lbs. compared with 187,679,734 lbs. in 1919.

A Demoralized Cattle Market

The customary habits of trying to kill two birds with one stone during international week was responsible again for a very sharp break in the cattle market. Feeders bring their shipments expecting to take in the Show at Chicago as a by-product of the trip. The result is a heavy run during that week concentrated at the point at which prices are largely established for other markets resulting in a loss which exceeds many times any possible saving in carfare. Other visitors plan to purchase feeding cattle during the same week so that the demand for thin steers rules comparatively strong and only a small fraction of the decline registered upon the grades of fat cattle is recorded in the feeder alleys. Almost invariably this situation develops during International Week at Chicago. Other markets are affected to some extent, but not so severely. This year the break was unusually sharp because of the general lack of confidence in the outlook.

Butter Market Still Slumpy

Butter markets appear not to have hit bottom yet. Eastern markets held fairly steady on fine butter up until Friday when another break occurred at New York. Support was lacking at Chicago and the decline was distributed over the week. Under grades were money losers as storehouses refuse in many cases to make further loans and sales are often forced. Fresh butter receipts were lighter this week than last, fortunately, or the decline in prices might be more severe and the losses heavier.

The storage situation grows worse each day, particularly for those holding poor quality butter. We hear of storage extras in New York as low as 48c with undergrade lots down to 33c. Such a price would reflect money pressure but most of the storage butter is fortunately in strong hands. Danish offerings were heavy in New York this week, with two more cargoes in.

Closing prices on 92 score butter on December 3d were as follows: Chicago, 50c; Philadelphia, 54½c; New York, 51½c; Boston, 52c.

Cheese Review

Cheese markets opened steady with the usual dull trade at this season of the year. Prices were steadily maintained until toward the close of the week when concessions were made especially on current receipts of the larger styles. Trade dullness was counterbalanced to a large extent by the light receipts. The decline in the butter markets was a factor toward the close of the week. Dealers made concessions to move goods as they dislike to have an accumulation.

Tact is courtesy expressed in terms of intelligence.

Hogs Like It

Quick Fat Means Quick Money

It is no trick at all to keep your hogs in the finest condition and fatten them in less time by feeding Semi-Solid Buttermilk. They relish it.

Semi-Solid Buttermilk
(TRADE MARK)

is pure, rich buttermilk with the water taken out. No harmful ingredients. Keeps fresh indefinitely. Semi-Solid Buttermilk is *manufactured exclusively by*

Consolidated Products Co.
Lincoln, Nebraska, Dept. 1012
I. H. NESTER & CO.
3 Chestnut St., Dept. 1012
Philadelphia, Pa.

Poultry

BARRED ROCK and R. I. RED Pullets

Nice big healthy pullets. March hatch $2.25, April, $1.95; May $1.75. GOOD MIXED PULLETS, mostly from mixed flocks of thorobred hens. March-April, $1.75; April-May, $1.60.
PALERMO POULTRY FARMS
R. D. Box 39. PALERMO, N. J.

PURE BLOODED Bronze, Narragansett, Bourbon Red, White Holland, Black and Slate breeding turkeys. These are from the finest flocks in America, and will please the most exacting buyer. Write for special prices until January 1.
F. A. CLARK. XENIA, OHIO. R-5.

LIVE POULTRY

Hay and all farm products wanted. Daily demand at good prices. GIBBS & BRO., 325 North Front St., Philadelphia, Pa. Estd. in 1844.

Sicilian Buttercups

Farm range, prize winning Buttercups. Investigate this wonderful variety. Write for circular.
MAPLE LAWN FARMS. CORTLAND, N. Y.

300,000 CHICKS Blue Hen Hatched for 1921. Leghorns, Reds, Rocks, Anconas, Minorcas, etc., at rock bottom prices. Satisfaction and safe delivery guaranteed. Fine illustrated catalog free.
KEYSTONE HATCHERY, Dept. 12, Richfield, Pa.

BARRON WHITE LEGHORNS. My egg a day line is America's heaviest flock average layers. Now booking baby chick orders for Spring delivery from pedigreed males of 267-292 records. Circular free.
WM. D. SEIDEL. STRAWBERRY RIDGE, PA.

S. C. W. LEGHORN BABY CHICKS, for 1921 delivery. Prices low, quality of the very best layers in America. Small deposit assures you of the chicks when you want them.
C. P. SHIREY. STEWARTSTOWN, PA.

Selby Service Satisfies Ship us your produce, poultry and eggs. Penna. Potatoes a specialty. Returns day goods are sold. Ask for our market letter.
SELBY PRODUCE CO., PHILADELPHIA

Tiffany's Superior Chicks for 1921. Wyandottes, Rocks, Reds and Leghorns. Pekin, Rouen and Runner Ducklings.
ALDHAM POULTRY FARM, R-39, Phoenixville, Pa.

100 S. C. W. Leghorn Cockerels for sale. Heavy laying strain. Also Black Minorca Cockerels. Must be sold at once. $2 to $2.25 each. These are choice birds. M. E. BASEHOAR, Littlestown, Pa.

Barred Rocks (pullet mating). Excellent layers. Buttercup, Ancona cockerels and pullets. Range raised. Prices right. J. K. Cadwallader. Wellsville, Pa.

MAMMOTH BRONZE TURKEYS for breeding large thrifty stock. For prices write
ROBERT T. FISHER. Selinsgrove, Pa.

Miscellaneous

LIVE STOCK AUCTIONEERING
BY OUR EXPERIENCE WE CALL REGISTERED OR GRADE SALES TO THE SATISFACTION OF SELLER AND BUYER ANY WHERE. WIRE OR WRITE THE DATE. WE WILL DO THE REST. TO
FRED R. ZOOK,
MARTINSBURG, PA.

PURE-BRED SHETLAND COLTS

for sale. One [illegible] for light use. Two weanlings. Strong [illegible] Registered stock. Send for list. Charmante Farms, Box 1632, Phila., Pa.

LARGE YEARLING RAMBOUILLET Rams. Shropshire ram [illegible] by 250 lb. imported ram. [illegible] O. I. C. boars and sows. [illegible] express paid.
HUBERT C. BEARDSLEY. Montour Falls, N. Y.

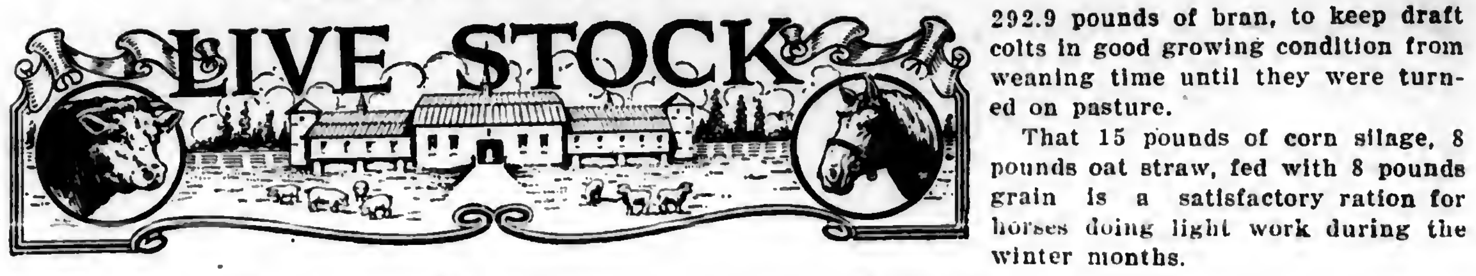
BEST BREEDS, chickens, ducks, geese, turkeys, guineas, hares, dogs. Stock for sale. [illegible]
H. A. SOUDER. Box P. Sellersville, Pa.

PURE BRED GEESE, Ducks, Turkeys, Chickens, Guineas, Dogs, Hares. Prices reasonable. Catalog free. H. H. FREED, Telford, Pa.

Reg. Holstein Bulls from calves to serviceable age. Herd tuberculin tested under Federal and State supervision. BONNYMEADS Farms, Harrisburg, Pa. R. I

PUREBRED BROWN SWISS CALVES, for sale. Come and see the goods.
G. E. BOWN. Forksville, Pa.

SUNNYBROOK GUERNSEYS
40 head, free of tuberculosis, bull calves for sale.
EDWIN B. MAULE. COATESVILLE, PA.



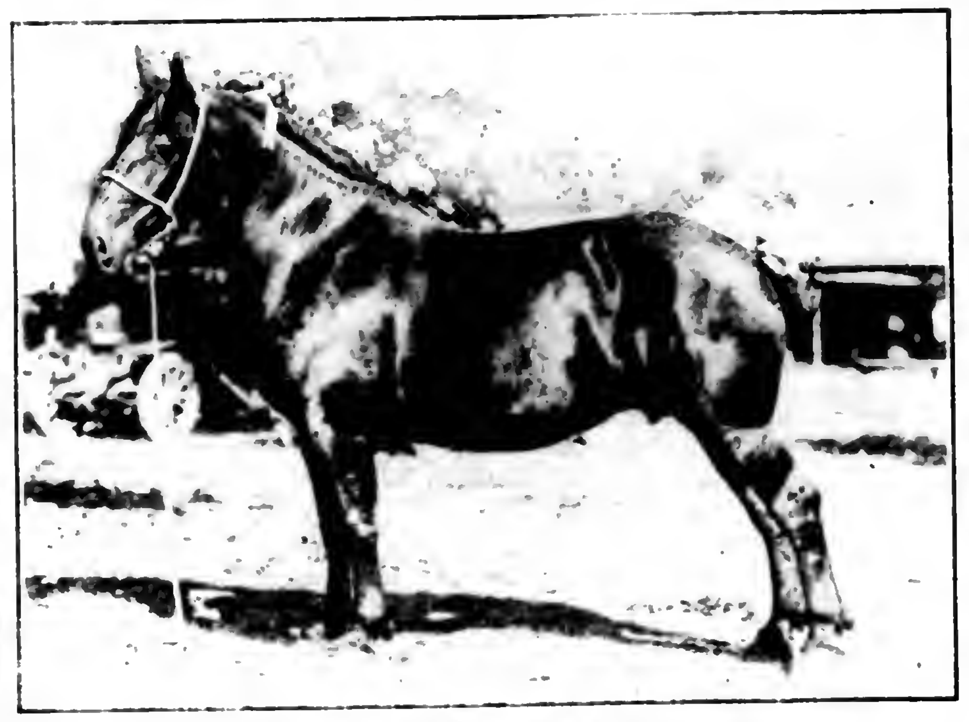
SELECTING THE BREED AND BROOD SOWS

When deciding upon the breed of hogs to keep, the fancies and conditions of that locality in regard to the different breeds should be taken into consideration. No doubt but all breeds are good, but it sometimes happens, in fact it often happens, that a certain breed is kept in a given territory to the exclusion of all others, and it requires some time and patience to introduce successfully a new breed and have it win favor over the well established breeds.

There has been a great advance in the knowledge which may guide farmers in feeding grain to hogs with a view of economizing. Many of us can recall the time when there was no particular guide in this matter. Every one fed according to his notion of needs, without any actual knowledge to direct him. Experiment stations have been equipped with men who are trained to investigate. They have the time for that work. They also have scales and other conveniences with which they are able to obtain accurate results.

When selecting a sow, get one with which the udder clings well up to the belly, because a sow, the same as with a cow, a hanging, flabby udder milks with a flush at first, but does not maintain the flow for any length of time. Even when in milk I like to see an udder that does not hang very much, but is broad across and which will go up to the sow when not in milk without leaving any palpable signs of having been in milk before. The sow should have at least twelve well developed teats, commencing as close as possible behind the fore legs, as it is the more forward teats that furnish the most milk. I do not consider it necessary for a sow to have more than twelve teats, because that number of pigs is as many as any sow can properly raise and she will do better in the long run if allowed to raise only ten pigs. The less the number of teats the better is the chance for udder development, and I have noticed in this matter that the sow with fewer teats feeds her pigs better than the one with a large number of teats, even if allowed to raise the same number of pigs.

When purchasing a matured brood sow I like to see her last litter, some valuable conclusions can generally be drawn therefrom. If she has done well by them, it matters not if she is thin in flesh, in fact it may be taken as a good sign. Yet I do not like to see a sow that has become extremely thin in flesh. I do not consider the first litter as much of an indication as to the future breeding value of a sow, for many times I have had young sows raise but three or four pigs, and not very good ones at that, but afterwards turn out to be very profitable brood sows.—M. C., Ithaca, New York.



Grand Champion Perchon Mare, "Syncopation"

RATIONS FOR HORSES AND COLTS

Experimental and demonstration work by the University of Missouri College of Agriculture shows:

That draft horses averaging in weight approximately 1600 pounds and which did 4.8 hours a day average farm work required an average ration of 14.91 pounds of grain and 17.12 pounds of timothy hay.

That brood mares may be used efficiently for farm work, but the yearly feed required by them is 26 per cent greater than the cost of feed required by gelding or "dry" mares doing the same work.

That brood mares working and nursing foals required 47 per cent more grain and 32 per cent more hay daily during the suckling period than dry mares.

That foals during the suckling period consumed an average daily ration of 3.58 pounds of grain and 1.35 pounds of hay, in addition to their mother's milk.

That draft colts consumed an average daily ration of 6.68 pounds grain, 7.42 pounds hay daily from weaning time until they were turned in pasture in the spring, a period of 219 days, during which time they gained 330 pounds and weighed at the close of the period 836 pounds.

That it required 4.40 pounds of grain and 4.83 pounds of hay to produce one pound gain on draft colts from weaning time until turned on pasture the next spring.

That in using a grain ration composed of two parts corn, 2 parts oats, 1 part bran, it required 10.46 bushels of corn, 18.30 bushels of oats and 292.9 pounds of bran, to keep draft colts in good growing condition from weaning time until they were turned on pasture.

That 15 pounds of corn silage, 8 pounds oat straw, fed with 8 pounds grain is a satisfactory ration for horses doing light work during the winter months.

WINTERING CATTLE

One of the essential things I have observed in the successful wintering of cattle or any other livestock for that matter is to put them in good flesh before the coldest winter arrives. The animal body requires more heat in winter than in fall and a little fat serves to keep the body warm at smaller feed cost. The animal can also be kept in better flesh and fat may be added more economically than if the animal goes into winter thin or in poor flesh.

I never have seen any good results obtained thru stinting the livestock with feed. We make it a practice to keep our stock well fed, and it has paid every time. As soon as the grass becomes short, or the stalk and clover pastures thin, we begin supplementing with grain. Corn, oats, and cottonseed meal or oilmeal given in limited quantities fleshen the cattle and sheep economically.

On rainy days or during any inclement weather it pays to keep them up and feed twice a day, giving them plenty of oats straw in addition to the grain feed. Good clover and alfalfa hay are splendid roughages. As long as pastures and the stalk fields are in good condition we are in no hurry to feed silage, as silage is one of the best of feeds when cattle must go on dry feeds in the winter months.

The plan I like best is to feed the grain and roughage as soon as necessary in the fall and into the early winter and reserve the silage for use during the middle and latter part of winter, and until the pastures are ready in the summer or the steers sent to market. This has proven to be a convenient and economical method in our feed lot, because usually by the first of January the corn is husked and out of the way and feeding and hauling of manure provide sufficient winter work. This plan cannot be rigidly followed because of varying conditions, but it usually enables us to plan a good feeding system, with the cattle going into winter thrifty and carrying good flesh.—J. L. Justice.

CROP PRODUCTION LESS PER CAPITA

Crop production in this country in 1919, as estimated by the Bureau of Crop Estimates of the United States Department of Agriculture, was 11 per cent above the average of the prewar years 1910-1914, and this was not previously equaled except in 1915, when the production was 16 per cent above the average. Late in the growing season of 1920 the production of crops was apparently 13 per cent above the average.

A tale of another sort is told when crop production is compared with population. During the last 30 years the largest per capita production was in 1898, when it was 12 per cent above the average of 1910-1914. In most of the years from 1896 to 1915 per capita production was above the average. The highest point, however, reached since 1915 has been the average of the five years mentioned, and this was done in 1917 and apparently in 1920.

STOCK YARD HOG FOOD
$55 Per Ton

SEND FOR SAMPLES

Better results come from using CONSOLIDATED DIGESTER TANKAGE and STOCK YARD HOG FOOD. Scientifically made in PRICES, attractive proposition. Deal direct with makers. Cleanest, most sanitary abattoir. LOW. We cannot take on many new customers this season.

CONSOLIDATED DRESSED BEEF CO.
Schaumer Dept. B.
West Phila. Stock Yards, Philadelphia.

O.I.C. Swine We have some bargains at present in young pigs and service boars. Will close them out very cheaply before going into winter quarters.
ELM GROVE STOCK FARM, Cortland, N. Y.

REGISTERED DUROC-JERSEY PIGS

$10 each while they last, all from imported Southern stock, none better. Bargains in bred gilts, service boars, brood sows and spring pigs.
C. W. Mills, Jr., Maple Lawn Farm, Cortland, N. Y.

REG. BIG TYPE old-fashioned spotted Poland Chinas of quality. Am offering a few choice sow pigs, bred from a half brother to a $21,000 boar. Both sons of noted sire, King Lear, a 1000-lb. boar. Write for prices.
G. CLYDE THOMPSON,
Chambersburg, Pa., R No. 10.

REGISTERED O. I. C.'S

All ages. Bargains in bred gilts and boars of all ages. We are overstocked and the price is right.
ELM GROVE STOCK FARM,
Cortland, N. Y.

CRYSTAL SPRING STOCK FARM, Seelyville, Pa. Offer 20 registered Berkshire gilts of April farrow weighing 185 to 200 pounds, by Symboleer's Masterpiece, the wonder boar and son of our American Champion, Symboleer's Junior. 2 boars suitable to head the best herds anywhere.

BIG TYPE POLAND CHINA BOARS and gilts for sale, from prize winning blood. Caldwell's Big Bob, Liberty, Fesenmyer, etc. None better for the money; 60 to 75 lbs. $25 at present. Satisfaction guaranteed. B. M. KLEPPPINGER, Coopersburg, Pa., R-2.

VIEWMONT FARM

Mainville, Pa., offers choice O. I. C. 150 to 175-lb. April and May pigs from Schoolmaster boar and Callaway Edd sows. Reg. free. Shipped C. O. D.

Large Type Reg. Berkshires of all ages for sale. Select a breeder from a large litter. Pay when you see stock. No cash in advance.
DAVID WIANT. HUNTINGTON MILLS, PA.

REGISTERED DUROCS—Fall pigs both sexes for sale. Also a few mature animals including a good boar. Good breeding. Right type.
Northumberland Co. Duroc-Jersey Breeders' Assn., I. M. Fry, Corresponding Sec'y, Sunbury, Pa.

FOWLER'S PURE BRED HAMPSHIRES
Will please you.
Best and largest herd in East.
THE FOWLER FARMS. MACUNGIE, PA.

REG. DUROCS Large size, heavy bone, best blood lines, prices reduced for fall. Satisfaction guaranteed.
JOHN W. COX & SON. New Wilmington, Pa.

REG. BERKSHIRE PIGS, both sexes, for sale. Large type. Also one Guernsey bull, 3 years old. Papers free with all.
WALTON OUDDERAR. NEW WINDSOR, MD.

Reg. Berskshires with size and quality; long bodies, good in back and legs. Fall pigs and bred sows.
NEARBY STOCK FARM, POTTSGROVE, PA.

Big Type Poland China. Sired by Chief Lad, a grandsire of Mountain Giant, the $5,000 boar. Papers fur. Satisfaction guaranteed. J. S. Funsten, Amberson, Pa.

NELSON'S BERKSHIRES—Fall pigs, $10 ea. Some nice spring gilts and boars, $35 to $50 each.
W. D. NELSON, JR.. PORTER, DELAWARE

Large Berkshire Swine Registered High Grade. Prices reasonable. Write HOME FARM, Center Valley, Pa.

HAMPSHIRE SWINE
LOCUST LAWN FARM, Bird-in-Hand, Box 2, Pa.

MILK-FED BERKSHIRE PIGS, $10 up. Reg. and guaranteed.
Barnes Purebred Stock Farm, Grove City, Pa.

CHESTER WHITES—Bred sows and gilts, service boars. Sept. pigs, either sex, or pairs not akin. Reg. free. Twin Brook Farm, Newville, Pa.

CHESTER WHITES For Sale. Service boars and young pigs, all ages.
ALLAN R. MORTON, ASHVILLE, N. Y.

POSECOYO FARM'S Durocs of Quality. Well kept, well bred, well fed.
D. M. STOUDT. Hershey, Pa.

FOR SALE—Reg. Big Type Poland China Spring boars and Gilts, one herd boar, 2 years old, choice fall pigs. R. H. LYLE, Cadiz, Ohio.

REG. BIG TYPE POLAND CHINA pigs, $15.00 each. first of November delivery.
C. E. SECHLER. MARKLETON, PA.

REG. O. I. C. pigs all ages, selected stock, attractive prices.
BRUBAKER BROS.. Star R., Cocolamus, Pa.

DUROC BOARS ready for service. Feb. gilts that will make something fine. Fall pigs, either sex.
H. H. SAGER. BASIL, OHIO

HAMPSHIRES—Pigs either sex or pairs not akin, [illegible] weeks and up. Reg. free and satisfaction guaranteed. E. D. WHISLER, Newville, Pa.

CHESHIRES—A few good pigs [illegible] from prize winning stock.
MORNINGSIDE FARM. SYLVANIA, PA.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Cracked Heels.—We have a horse which has sore legs. A sort of matter mixed with blood runs from sore parts. I would like to know what can be done for him. M. M. A., Honey Grove, Pa. Wash the sore legs with soap and water and apply the following lotion 3 times a day: Acetate of lead, one ounce; sulphate of zinc, 6 drams; tannic acid, ½ oz.; water, one quart. The legs should be kept dry and clean. Give him a teaspoonful of powdered nitrate of potash at dose in feed or in drinking water once or twice daily.

Bruised Knee.—I have driving horse which when driven fast is inclined to strike knee with his foot. It is only lately that he has been striking and I would like to know if it can be prevented by any kind of shoe. A. J. K., Mt. Pleasant, Pa. Don't rein head up too high. Shoe him level, use light shoes and don't drive fast. Perhaps you had better have him wear knee boot. Dissolve one ounce sugar of lead in one quart of cold water and wet knee three times daily.

Obstructed Breathing.—I have a heifer calf, two months old, which seem to have sore throat. When she breathes a rattling sound is made and seems to swallow food with some difficulty. None of the remedies I have applied or given has done her any good. In looking thru your column I have seen where you prescribed for such cases and trust you will prescribe for my heifer. H. S., Elmer, N. J. Apply to throat daily, one part iodine and ten parts fresh lard.

Suspicious Symptoms.—I have a fine cow that breathes heavy at times, has some nasal discharge and she makes a roaring noise or sound, most of time. She is not thriving as well as usual and not giving as much milk. What can be done for her? J. F. M., Mt. Pleasant, Pa. If she has not recently been tuberculin tested, you will make no mistake in having it done. Her symptoms are suspicious. If she fails to react to above test, give her three drams of Fowler's solution at dose in feed or water 2 or 3 times a day. Rub throat with camphorated oil twice a day. Increase her grain ration.

Sore Throat.—Chronic Cough.—I have a collie dog two years old that has been troubled with a slight cough for the past 4 months. During the past week the cough has become more severe and frequent. Have thought his throat was sore, as he refuses to eat solid food, preferring milk to any other kind of diet. F. C. B., Bridgeville, Del. Rub his throat with one part tincture of iodine and three parts camphorated oil twice a day. Give him sixty drops of camphorated tincture of opium at dose three times a day. Add fresh eggs to his milk diet and offer him all he will eat of it.

PROF. APP MADE SECRETARY

Frank App, professor of Agronomy and Farm Management at State Agricultural College, was made secretary of the State Council of County Board of Agriculture on October first. Dr. App has not severed his connections with the college.

Good Hogs Made Better

All hogs that grow fast and produce pork at a profit are good hogs. And the difference between good hogs and poor hogs—*between profit and loss*—is largely the difference in their health and vigor. You can hurry your hogs to market weight in shorter time—cash-in on them quicker—make good hogs better—make poor hogs profitable, by adding to their ration a small amount of

Pratts Hog Tonic

Not a food—does not actually grow bone and flesh—but a tonic and regulator, that tones up the system and puts hogs in tip-top condition. Helps keep disease away; makes hogs healthy and hearty. Then they stand up under the strain of heavy feeding and turn *all* their feed into pork. If you've never used Pratts Hog Tonic you don't realize how fast a hog can grow if given a fair chance.

Here's what we know about Pratts Hog Tonic—and our money-back guarantee backs this statement: It makes hogs healthy—it keeps hogs healthy—its use brings more pounds of pork from each bushel of feed—it brings hogs to full market weight 30 days quicker—it improves breeding stock so big litters of strong pigs are the rule.

"Your Money Back if YOU Are Not Satisfied"

Make the test *at our risk*. Every day you delay means a loss to you—so start today.

There's a Pratt Dealer near you

PRATT FOOD CO. Philadelphia Chicago Toronto

Makers of Pratts Poultry Regulator, Animal Regulator, Cow Tonic, Dip and Disinfectant, Stock and Poultry Remedies H-37

Pratts

GUERNSEYS

Let us send you some good pointers on preparing cattle for a sale or show, written especially for the busy man who cannot employ a professional show man.
The American Guernsey Cattle Club
Box M 3 Peterboro, N. H.

QUALITY ECONOMY QUANTITY

Yearling Holstein Bulls

Ready for service, well-grown, and extra good individuals. They are from tested dams, of Ormsby, Veeman, Lyons strains, and are sired by King Lyons Ekster Lad, a prize winning son of King Lyons, sire of nine 30 lb. cows. To make room, will be sold at bargain prices.
I. R. FOSTER & SONS, Owego, Tioga Co., N. Y.

BULL CALVES at BARGAIN PRICES

We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred, healthy bulls, from a clean, Tuberculin Tested Herd at reasonable prices. King of the May—Dolly Dimple—Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees.
WAWA DAIRY FARMS, 22 S. 32nd St., Phila., Pa.

STEVENS HOLSTEIN FARM

of Cortland, N. Y., offers pure bred cows and calves, all ages; also extra high grade Holstein heifer calves $20 each, express paid in lots of 5; 2 heifer calves with purebred bull calf $75. Grade Holstein cows in carload lots. Wire me to meet you.
PAUL H. STEVENS, Prop.

ORIGIN FARM

Hornless Holsteins, Registered and A. R. O. animals, all ages, for sale. Federally tested.
GEO. E. STEVENSON. SCRANTON, PA.

3 REGISTERED Guernsey bull calves of good producers, 7 and 8 months old. R. L. BALDERSON, Mgr. Silver Lake Farm, Newtown Bucks Co., Pa.

Ayrshire Bull Calves From high record A. R. Dams.
ROBERT TEMPLETON & SON, ULSTER, PA.

Reg. Holstein Bull Calves, from officially tested dams and a 30-lb. sire. Write for prices, pictures and pedigrees. Walter M. CRUTTENDEN, Forty Fort, Pa.

Bull Calves At Farmers' Prices

We offer farmers an exceptional opportunity to secure a "King of the May" "Golden Secret" Bull Calf at farmers' prices. This calf is from a clean, healthy, tuberculin-tested herd and is sired by Brookmeads Royal Master of Riverview No. 50361, who is a brother to Langwater Steadfast No. 31672, the bull that sold for $25,000 at the Langwater Sale, Sept. 21, 1920, the record price for the breed; is also brother to Langwater Stars and Stripes 2nd, who is Brookmead Farms' great herd sire; and grandson of Imp King of the May, who now has 30 A. R. daughters who exceed 622 lbs. butterfat; and is also sire of the famous cow Dolly Dimples May King of Langwater. Calf beautifully marked, real fawn and white. If you want a sire you'll be proud of, at a reasonable price, here's your chance.
RIVERVIEW FARMS. SWARTHMORE, PA

200 HOLSTEINS Guaranteed HEALTHY

Carload of any age in
Registered or Grades
Calves, yearlings, 2 year olds, cows or bulls.
60 Day Retest Guaranteed
High grade heifer calves $20 each
John C. Regan, Tully, N. Y.

MAPLE LAWN HOLSTEINS

High grade heifer calves, $25 ea. safe arrival guaranteed, shipped C. O. D. I have the finest line of reg. and grade cows in central New York. Wire me when you will be in Cortland; my farms and offices will give you quick, efficient service. For immediate sale 100 heavy producing cows, all young, will freshen in next 60 days. Everything in Holsteins.
C. W. Ellis, Jr., Maple Lawn Farms, Cortland, N. Y.

HOLSTEINS ARE CHEAPER than they have been in years. Now is the time to buy excellent cows and heifers, bred to freshen soon, from our tuberculosis-free herd, under Federal Supervision. Never any reactors. Let us tell you more about them.
WEST BRANCH FARM,
S. A. Miller, Linden, Pa.

WANTED A HOME

for choice registered and high grade Holstein-Friesian heifer and bull calves. $25 and up. Write us your wants. Browncroft Farms, Cortland Co. McGraw, N. Y.

A BEAUTIFUL, light-colored, 22-month-old heifer Holstein, bred to grand registered bull, dam a 14,000 lb. milk cow. Price $65.
OAKS DAIRY FARM. Wyalusing, Pa.

MILKING SHORTHORNS—Young bulls, a few cows, and young heifers of the best breeding.
C. M. KENNEDY & SONS. ULSTER, PA

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale.
MILLARD E. BASEHOAR, Littlestown, Pa.

RUGGED PRODUCING AYRSHIRES

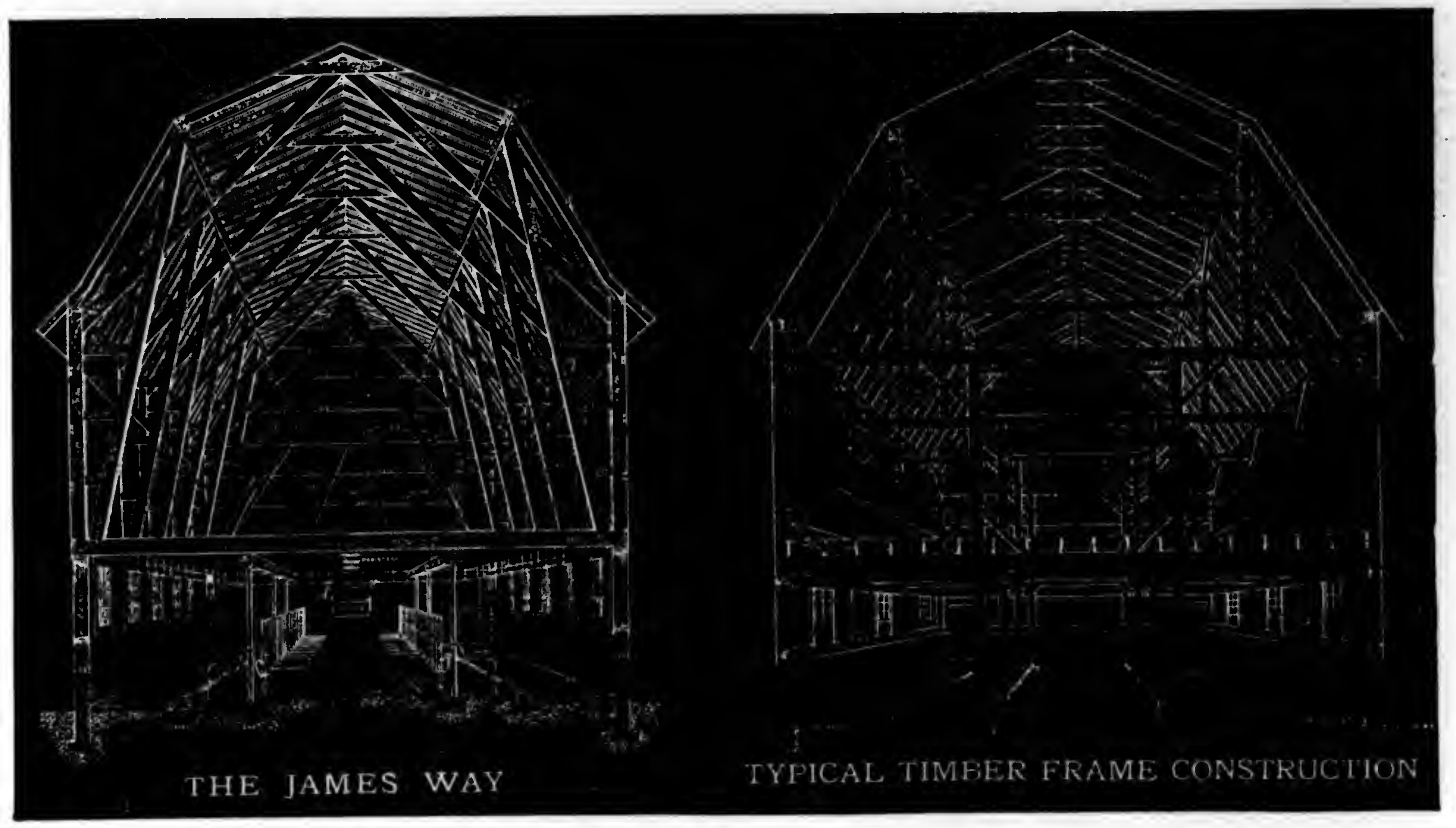
The herd has a strictly business atmosphere and they are bred for maximum production of milk and butterfat. If you admire the look of a producer they will appeal to you as the premier show type. Our present offering is one choice bull calf from the best blood in the herd and backed by excellent records. Also a couple young cows and heifers. Herd tuberculin tested, no reactors.
CRESTMONT FARM. 30 N. FOURTH ST., SUNBURY, PA

Bradford County, Pa. For more than a quarter of a century this county has been well known throughout America as a center for producing good livestock. Today over 250 breeders are engaged in breeding registered Holsteins, Jerseys, Ayrshire, Guernseys and Milking Shorthorns of such quality and prices as to attract the beginner or the established breeder.

There is now available for immediate sale a limited number of both sexes of the above mentioned breeds. Special Offer Now—Two Registered Holstein bulls [illegible] well grown, excellent type, Federal tuberculin tested. A. R. O. records, price [illegible] each. Address inquiries to

D. K. Sloan, Secretary, Bradford County Livestock Breeders' Association
TOWANDA, PENNA.
Office in Court House with [illegible] Bureau.

You Build But Once-Be Sure You Plan It Right



9 trussee for 100-ft. barn like this requires 706 board feet. At $60 per M—$381.24. { *Which is the better way?* } *9 trusses like this requires 1266 board feet at $80 per M—$911.52. A difference of $530.29.*

Mistakes on paper are easily rectified and buildings on paper are readily moved. Once built, changes can be made only at great expense.

It pays to plan a remodeling job or a new dairy barn, *on paper, before* the foundation is dug, *before* the carpenters come, *before* actual work is begun.

The dairy barn is your factory, your workshop, in use almost daily throughout the year.

If it is not built right, if it is not correctly planned, it may lose you money every day.

Wrong location of posts, inconvenient arrangement of feed bins and feed rooms, incorrect arrangement of carrier tracking or stalls or pens, or the wrong designing of the hay loft, may compel you to take more steps, do more work and pay out more money for help each day during the life of the barn.

Save Work Daily — Save Building Costs

A chain is no stronger than its weakest link. A timber is no stronger than its tenon.

A silo or a door in the wrong place, poor arrangement of equipment, ventilating intakes or outtakes improperly installed, mistakes in size in stall floors, gutters, passages and alleys—even these smaller errors may be a source of daily expense and annoyance.

A barn correctly designed and built right in every detail is a constant money maker because it is a constant money saver.

If rightly planned, cow comfort and cow cleanliness may be assured; plenty of light, abundant ventilation and easy disposal of litter will be provided; floor space will be used to best advantage; and all the chores made easy. In many a case, careful planning has cut barn work squarely in half.

What a barn will cost depends in no small degree on the care with which it is planned in advance.

It is no uncommon thing to see a man with the "Know how" build a barn at 20% to 30% less cost than another, although the barn accommodates the same number of cows.

And the man with the "Know how" gets a handsomer building, more convenient and better.

How to Get the Low Bid

Regardless of who designs the barn it is well to submit the final plans to several contractors, getting bids from each.

By having as many sets of blue prints and specifications as there are contractors figuring on the barn, you can safely let the contract to the lowest bidder.

You get the low price, and the successful bidder binds himself to give you the same workmanship, construction and materials as those who bid higher. You hold him to the blue prints and specifications.

National Clearing House of the Best Barn Ideas

To help our customers and others get the best barns possible, we, years ago, established the Jamesway Barn Plan Service under direct supervision of Mr. W. D. James, known as the leading dairy barn authority in the U. S.

Associated with him in this department is an architect and engineer of unusual experience in ventilation, reinforced concrete, steel work and structural design.

Another architect with many years of experience in planning, building and remodelling of dairy barns, a large force of skilled barn designers and draftsmen, and barn experts in charge of divisions of the field force, complete the office staff.

In the field, are more than sixty men who practically every day are consulted by farmers on remodeling and other barn problems, drawing preliminary plans and reporting new ideas and unusual conditions.

For years, Mr. James and these associates, have studied dairy barns—how to best remodel; construction, lighting, ventilation, drainage; how barns should be arranged for labor-saving. Every year they plan or help to plan thousands of dairy barns.

The experience and help of these men is yours for the asking. No charge is made excepting when complete plans and specifications are ordered.

Barn Book Free

Much of their experience and the best of their ideas are contained in a 320-page book which will be sent postpaid on request.

In addition to 28 pages of blue prints, 62 pages of pictures of barns in all sections of the country and many pages on barn planning, ventilation, remodeling, etc., this book tells all about James inventions that save so much of labor, prevent spread of disease, promote better cow health, make simpler the care of calves and sick cows, protect against dangerous bulls and increase milk yields.

Write us now. Tell us what barn problems are bothering you; perhaps we can help solve them.

If you want the book, ask for Jamesway Book No. 26

James Manufacturing Company, Elmira, New York

Jamesway

Labor Saving Equipment for the Dairy Barn

Library Agri College
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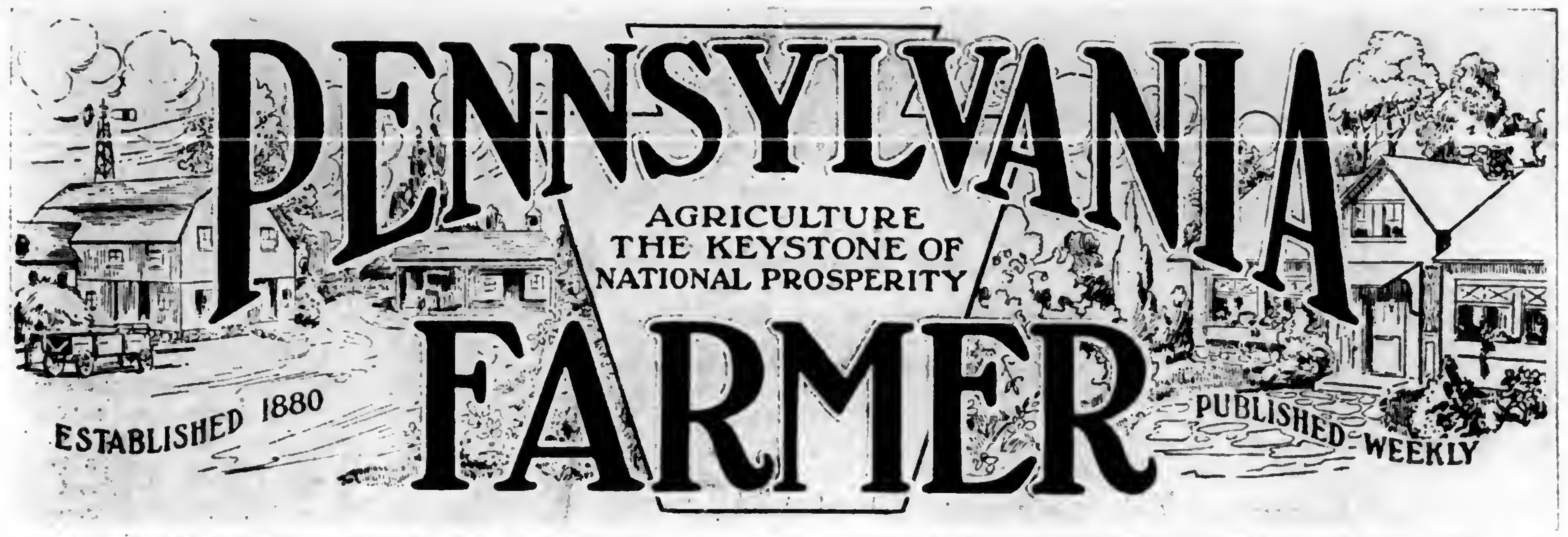

PENNSYLVANIA FARMER
AGRICULTURE THE KEYSTONE OF NATIONAL PROSPERITY
ESTABLISHED 1880
PUBLISHED WEEKLY

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The International Livestock Show

The 21st International Livestock, Hay and Grain Show at Chicago, Nov. 26-Dec. 4, may not have surpassed all preceding exhibitions but only the most discriminating observers were aware of the fact. Competition was keen and accommodations in all classes were comfortably filled with the exception of horses. Here there was a shortage due, it was reported, to the failure of the management of the show to abide by the wishes of the breeders' organizations in the choice of judges. The usual heavy representation from Ohio was conspicuous by its near absence. Consequently the horse show at the Ohio State Fair may justly claim the laurels for the greatest draft horse show of 1920.

The unsatisfactory market conditions which have affected sales of purebred livestock resulted in reports of low sale averages and of losses upon purchases made a short time ago. Mingled with this sentiment was a dominant note upon the outlook which regards the present as a real opportunity of the farmer-breeder who wishes to improve his herd, flock or stud.

Thoughtful breeders also see in the present situation a correction of one of the bad effects of high prices, namely the sale of inferior purebreds for breeding purposes. Good animals can be sold now but the inferior stuff must find its proper outlet at the shambles.

The grain and hay exhibit, first added last year, was expanded about 50 per cent. All parties consider this an excellent addition to the livestock show because the majority of the visitors to the show have always been diversified farmers, interested in the production of field crops as well as livestock, and some of the promoters see in this development the possibility of expansion of the show until it covers the entire realm of agricultural production.

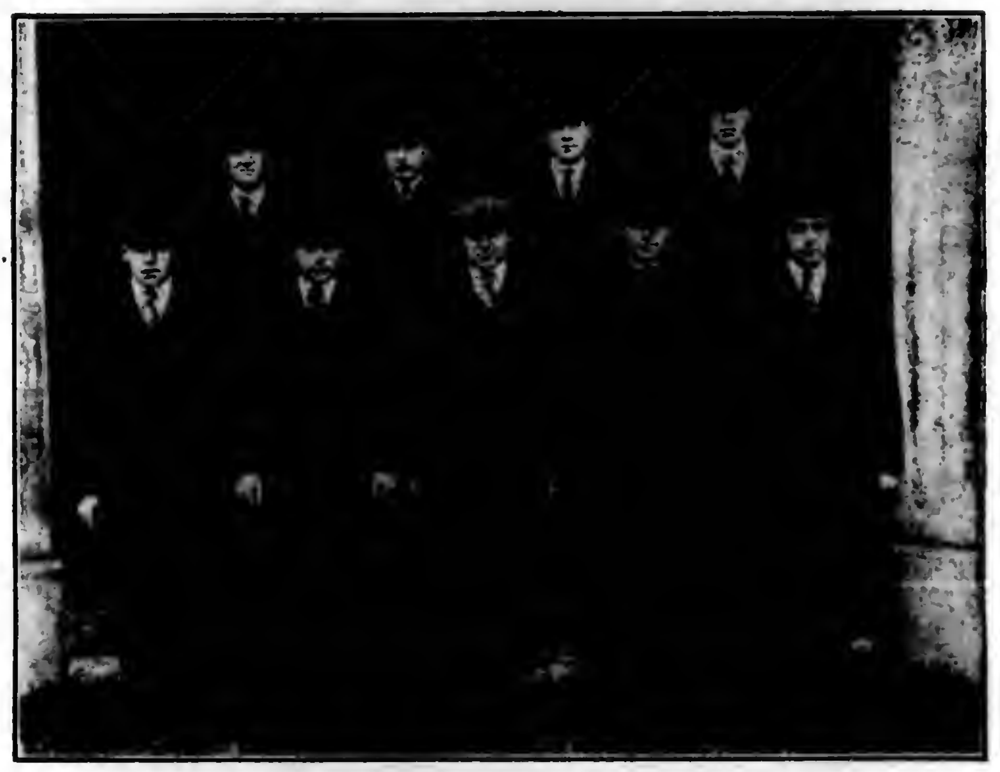
Educational Exhibits

The educational displays were of exceptional merit. The experiment stations of Indiana, Missouri, Michigan, Wisconsin and Kentucky and the state agricultural departments of Illinois and Louisiana presented by various methods of graphic art the work which each is doing for the promotion of agriculture within their respective states. The Indiana exhibit told the lesson of limestone and phosphate and of supplementing the corn ration of hogs with some form of protein feed. Missouri's story covered rations for purebred draft colts, feeding for high egg production and methods of preventing soil erosion. The work of the Illinois Department of Agriculture in seed inspection was the principal feature of its display. The remarkable story of the organization in Michigan for promulgation of pure seeds was a striking feature of its exhibit. Experimental test plots at the agricultural college were represented, where new and improved varieties are developed. These varieties are multiplied in reliable hands by the members of the Michigan Crop Improvement Ass'n, whose work is supervised by the college which inspects and tests the seeds produced by these farmers, and furnishes a guarantee of purity and germination. These registered and guaranteed seeds are then sold co-operatively thru the seed department of the Michigan Farm Bureau.

Unfortunately Ohio was not represented by an exhibit in this section, because of the failure to obtain the necessary appropriation. The pride of Buckeye visitors was humbled by this fact, and all visitors failed to obtain the benefit of the valuable work which has been done at the Ohio Experiment Station and the agricultural college.

The United States Department of Agriculture exhibit included a display of colored transparencies showing the various market classes and grades of livestock, illustrating the classification used by the bureau of markets in its reporting work. The telegraphic reports issued by the same bureau were shown upon blackboards nearby. Other features covered the machinery and methods of milling and baking tests of flour, testing farm seeds for impurity, insect and plant pests with illustrations of the damage they do and methods of eradication. There were examples of various clovers, beans and millets. Analyses of various seeds and plants used extensively for livestock production were given to show their relative feeding value. An interesting feature was the series of transparencies illustrating the most effective methods of making hay.

The 1920 International Grand Champion Steer, "Black Ruler," Bred and Fed by Purdue University



This Purdue Team Won Student Judging at 1920 International

Bottom Row, left to right (Regular Team): M. P. Mitchell, H. R. Hofford, P. J. Brown, R. G. Fordice, G. L. Fisher.

Top Row, left to right: Prof. W. W. Smith, Coach J. M. Lilly, and Alternates, G. G. Buford and A. K. Mackey.

Purdue Wins Student Judging

Purdue University's student judging team carried off the honors in the greatest judging contest that the International has yet staged. There were 20 teams in the contest and Purdue led with 3,796 points, 91 points ahead of the nearest competitor. The next half dozen ranked as follows: Nebraska, 3,705, Iowa, 3,667; Kansas, 3,651, Minnesota 3,506; Ohio, 3,490; Colorado, 3,450. The Ohio team won second on judging beef cattle and a member of the Ohio team won first place on individual judging of beef cattle.

In the junior contest, with 11 teams entered, the lads from Georgia won first, with Michigan second, Iowa third, Indiana fourth and Illinois fifth.

Beef Cattle Show

The display of beef cattle was the only section aside from hay and grain which exceeded former displays in point of numbers. The show of fat bullocks held the first day drew the largest crowd on the grounds. For the first time the purebred steer exhibits surpassed those for grades and crossbred steers.

The Shorthorns

Forty-five purebred Shorthorn steers were shown, the grand champion being "Cloverleaf Jack," exhibited by W. C. Rosenberger, Tiffin, O. This steer was calved April 4, 1919, and weighed 1,570 lbs. He had manufactured beef at the rate of 2 to 2⅔ lb. each day of his life. Altho slightly uneven over his ribs, he was the runner-up for the grand champion. "A picture-book steer is a proper characterization of him.

Two of the leading exhibitors of Shorthorns in the breeding classes were Carpenter & Ross, of Mansfield, O., and Rosenberger & Sons, of Tiffin, O. The former showed a number of attractive calves by imported "Rodney," while "Cloverleaf Royal," the white junior yearling exhibited by Rosenberger, won the junior championship. The first aged, senior and grand champion bull went to Wm. Hartnett of Chicago on "Pellipar Iris," an imported entry. Carpenter & Ross's "Maxwalton Monarch" won first in the 2-year-old bull class. John O. Pew & Son, Ravenna, O., placed in a number of the calf classes, and Merivale Farms, Youngstown, O., also got into the money. The undefeated "Lady Supreme," exhibited by Frank Scofield of Texas, was made senior and grand champion female. A surprise was sprung when the junior calf, "Park View Augusta," exhibited by Gallmeyer Bros., Mechanicsburg, Ia., won the junior championship. This heifer was developed by a firm of breeders comparatively new at the game.

The Shorthorns were judged by John Sibson, of Buenos Aires, Argentine. Altho he was rather hard to follow competely thru his line-ups, it is granted that he generally picked the tops.

Grand Champion Steer

Again the bonnie blacks captured the grand championship, and Purdue University, which has made a remarkable record in the last three shows, brought this Angus champion "Black Ruler," demonstrated that he was well named. At the International a year ago he appeared in the senior calf class, where the judge left him at the bottom of the lineup of 34 contenders. This year he is proclaimed by practically all judges as the greatest grand champion steer which any International show has produced. He was fed by the university feeder, Jack Douglass, and is the result of university breeding. Chosen by Dean Skinner as a likely candidate, and shown by Prof. C. F. Gobble his stellar performance can thus be attributed to real team work all along the line. The final contest for the championship was between "Black Ruler" and a purebred Hereford steer from Kansas Agricultural College. While the Kansas steer showed more bulk and width, the Scotch judge preferred the extreme low-set bulk of the doddie. There have been wider steers than he, but he was a superb, almost faultless, example of the smooth rotund bullock which constitutes the but-

(Continued on Page 22)

Soils and Fertilizers

Conducted by Dr. J. G. Lipman

Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

Conservation of Plant Food

Geologists tell us that there is a tremendous movement of plant-food from the land to the sea. Much of it is lost by the process called erosion, that is, fine particles of the surface soil are carried away by running water and held in suspension until the velocity of the current slows down and the suspended material gradually settles out. The finest of it floats in the current until the fresh water reaches the sea. The salts in the sea brine cause the fine silt and clay particles to flocculate and to settle out, forming the deltas of our great streams. The suspended matter thus carried from land to sea contains vast quantities of plant-food.

The land is made still poorer by the leaching action of rain. As the rain water penetrates into the soil it dissolves compounds of lime, magnesia, potash, soda, nitrogen, iron and sulfur. These dissolved substances ultimately find their way to the sea. Many millions of tons of plant-food are subtracted from the crop resources of our soils. To some extent these losses are preventable: to a great extent they are not. Insofar as surface erosion is concered, much can be done to offset it by keeping the steep slopes covered with vegetation and by terracing the hillsides. By deepening the soil, by increasing its content of huus and by avoiding the accumulation of too much acidity, the loss of dissolved plant-food may be materially reduced. Still other losses of plant-food are also more or less preventable. Numerous quantities of nitrogen are returned to the air from improperly stored manure. Much nitrogen is lost when forests or meadows are burned over when straw and corn stalks are destroyed by fire. A new country like the United States cannot feel the meaning of these tremendous losses of plant-food as can a country like China or India where the recurring wastes of many generations have already left a deep impression on the national life, as is evidenced, for one thing, by the desolate and barren hill lands of China or the patient and almost tragic efforts of the Chinese and the Hindoos to repair the damage already done.

The population of our towns and cities now well beyond the 50 million mark. The food consumed in these cities leaves the agricultural regions poor in fertility. There is practically no salvage from these cities, for the plant-food contained in the human and animal wastes is sent down the sewers to the sea. For sanitary reasons, we cannot adopt the methods in use in China, but it is far from certain that we cannot safeguard the sanitation of our cities without continuing the terrific waste of fertility. To be sure, we make a feeble effort to save what we can from the wreck by manufacturing garbage tankage, by saving the waste from the tanneries, woolen mills and other manufacturing establishments. Our great fertilizer industry is always awake to the opportunities that exist for converting refuse material into available plantfood. But, on the whole, the problem of plant-food conservation is not receiving the attention that it deserves. An intelligent and systematic effort should be made to study the sources and extent of the losses of plant-food in the United States and to devise economical methods for its conservation. The best skill of engineers, chemists and sanitarians should be enlisted in dealing with this problem. Methods of approach have already been suggested to us by certain methods of sewage disposal and the preparation of so-called activated sludges. The latter are by-products of sewage disposal, valuable in part for the plant-food contained in them and in part for their high degree of bacteria activity. The old methods of composting refuse vegetable and animal materials are too costly, but there is no reason to assume that proper machinery could not be developed for making and handling composts economically on a large scale.

Wire Worms

I have land that is infected with wire worms. Would like to know how to get rid of them. They are in three fields. I am plowing two fields at this time and expect to let it lay as it is all winter.—H. L. B., Bucks Co., Pa.

The problem of getting rid of wire worms is a difficult one. There are a number of chemicals which can be used to get rid of wire worms, but, unfortunately, the cost of treatment is either too high or it takes a long time to remove the excess of these chemicals from the soil so that it might be fit again for the growing of crops. Among the chemicals which have been used successfully for the killing of soil-infesting insects mention may be made of carbon bisulfide, sodium cyanide, Kainit, common salt and sulfur. In the fight which is being made to eliminate the grubs of the Japanese beetle from Burlington County, N. J., comon salt has been used at the rate of two tons per acre. This is effective for roadsides and for places where crops are not to be grown. On the other hand, for land that is to be used for crops, this quantity of salt would leave the soil unfit for profitable crop growth for a number of years. There are reports of the use of Kainit at the rate of one ton per acre applied in the fall where wire worms and white grubs have been gotten rid of quite effectively.

The most practical method recommended is, of course, fall plowing. At this time of the year wire worms are down possibly eight to twelve inches, but deep plowing and exposing the surface soil to freezing and thawing will help to get rid of a large part of them. It is my impression that, if common salt at the rate of 1500 to 2000 lbs. per acre were broadcasted on the plowed ground this fall, the excess of it would be removed by next spring and there would be no serious injury apparent to crops of next season.—J. G. Lipman.

American Farm Bureau Federation Leaders

1. J. R. Howard, Iowa, President; 2. J. W. Coverdale, Secretary; 3. S. L. Strivings, New York, Vice President; 4. Gray Silver, Washington Representative.

EXPERIMENTS WITH SILAGE MIXTURES

Mixtures of soy bans and corn, and sunflowers and corn for silage have been tried with success at the Pennsylvania State College school of agriculture, and experiments with both will be carried further during the coming winter. Last year very satisfactory results were obtained thru feeding these combinations, so much in fact, that the experimental silos at the college dairy barns have been filled with a supply that will last thru another substantial feed period.

One silo has been filled with soy beans. Much interest has been manifested thruout Pennsylvania in the feeding value of this combination. Soy beans as hay have been steadily increasing in favor in certain sections of the state in the past few years, and there is general interest shown in its possibilities as an ensilage crop combined with corn. It makes a palatable and nutritious feed, and the only drawback thus far is the difficulty met by many farmers in planting and fertilizing both crops at the same time.

Experiments with the sunflower and corn silage, composed of equal parts of each plant, are being conducted by the college for the special benefit of the northern tier farmers where the seasons are short and it is difficult to ripen corn. It is claimed that the sunflowers will grow more tons per acre, will thrive on poorer ground and will stand frost better than corn. It is expected that a considerable amount of valuable information will be gained concerning the feed value of sunflowers and corn grown together for silage.

BLUE MOLD ROT IN APPLES

The peculiar strong musty smell so often encountered in apple cellars is due to the blue mold rot, one of the most destructive rot fungi in stored apples. When this musty smell is present this rot exists somewhere on the bin or boxes and if it is strong it is likely to impart a decidedly unpleasant flavor to the contents of the cellar. This smell also indicates that the funges is forming innumerabe spores which will infect and rot other apples. To keep down loss from blue mold rot, pick out and destroy the rotten fruits at frequent intervals and keep the cellar cool, clean, well aired and dry.

CARE OF GARDEN TOOLS

Wheelbarrows, hoes, rakes, cultivators, shovels, picks, trowels, weeders, spading forks, etc., are carelessly thrown aside after their summer's service. Next spring they are found the worse for rust; sometimes entirely ruined.

Paint applied to the metal as well as the wooden parts before putting them in winter storage would protect them from rust. In the spring after a few days of use, the paint will have worn off the working parts leaving the metal bright and clean. Tools will last much longer if given this treatment.

A cup or medal or other trophy is not the real prize the victor receives; the real prize, the real reward, is the satisfaction derived from superior, worthy achievement.

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OUR JOB is to serve our readers. Whenever you are puzzled, write to us and we will help you if we can.
—The Editors.

The Christmas Lesson

WITH THE WORLD still in the midst of turmoil and strife, and with a spirit of war dominating the trade and political relations of men, it seems almost like mockery if not sacrilege to talk about observing the Christmas celebration. Yet, when one stops to think about it, the hope for improved conditions and a better world is dependent upon humanity's fully learning the lesson contained in the heart of the Christmas message. As a panacea for the ills of humanity, as a solace for the suffering and heart aches of a troubled and almost hopeless world, there is nothing so effectual as would be the unreserved acceptance of the Truth which was sung by the angels to the unlettered shepherds of Judea. For the time being, men seem to have forgotten that "Peace on Earth" can only be attained thru "Good will to men." The indications are that mankind is placing more dependence upon possessions and power as means of securing happiness than they do upon following the example and precepts of The Man of Galilee. May the spirit of the coming Christmas season tend to soften the hearts of humanity, and cause us to hark back to the simple lessons of childhood from which we learned most of the good that is in us now; to the time when our faith in goodness was unshaken and our love unselfish.

Our New Story

WE BEGIN this week the publication of a new serial story which we know will be appreciated and read thru by all who read the opening chapters. Young and old alike will enjoy "The Voice of the Pack" because it is so full of human interest and because of the active and latent interest which every one has in Nature and in life in regions where Nature reigns supreme.

No one, it is said, however safe and protected, can hear unmoved the cry of the wolf pack. It is the symbol of the wild, or so it seemed to Dan Failing, come back to the home land of his frontiersman grandfather to spend the last four months of life which the specialists had given him. Back in the unbroken forests, however, Dan experiences a curious throwback to his famous ancestor. Outside of his bodily weakness, he seems almost a reincarnation. He is a woodsman by intuition, a dead shot at sight, and his knowledge of the wild creatures springs up practically full-fledged, a strange instinct. Then his joy and love of the life, and also his love for his mountaineer host's daughter, Snowbird, awaken his ambition to live. Eventually he proves himself at all points a man, a worthy descendant of old Dan Failing, the finest frontiersman of his day.

Incidentally there are glowing descriptions of the primitive woods, thrilling recitals of encounters between its wild denizens, an account of a mountain lion's stalk [illegible] one personally thankful at the [illegible] beast's [illegible] and a remarkable picture of a [illegible].

Besides being a stirring narative the story conveys a message without preaching which is valuable because of its suggestiveness in these days when the Great White Plague is one of the most serious menaces of human life. We earnestly recommend our readers to begin with this issue and not miss a single number while it lasts. It will appeal to all—lovers of adventure, lovers of nature and lovers of romance.

WHAT OF THE FUTURE?

What Hopeful Signs Are There for the Farmer in the Midst of the Present Period of Losses and Falling Prices?

THIS COUNTRY recently witnessed the quick, quiet but effective mobilization of its men and resources for war, and the end sought was speedily attained. Success was due to numbers and to intelligent co-operation. Another crisis is at hand, but of a different nature. The future welfare of agriculture in general and all farmers in particular is in the balance just now. Shall farmers have to pass thru the same heart-breaking experiences as did those of two and three generations ago? We believe not. The uniting of purposes and the mobilization of numbers for a common cause is proceeding along lines and at a rate never before known. Farmers are not accepting the explanations given for the quick and violent slump in farm prices and the consequent losses. They do not believe the reasons given for the lack of credit for agricultural operations, because banking institutions were never more prosperous, and their incomes are derived from interest and discounts. It is worse than a waste of words to try to explain to the farmer that $1.67 is a logical price for wheat in the face of the export figures and the world's demand. Neither does he believe that the law of supply and demand is functioning when a whole cowhide will not bring enough to buy a good pair of shoes, and the best price he can get for corn is less than 50 cents per bushel. So far, no interest has yet had the temerity to ring the old stock excuse of "over supply" as the reason for present prices; but the excuses given are scarcely less logical. Farmers are beginning to realize that the remedy for unfavorable conditions lies chiefly in their own hands.

For the purpose of forcing a more stable condition in farm prices and a better return for work and investment, farmers are at last getting toegther as never before. While the general state of organization is as yet more or less nebulus, the movement is so universal and so pronounced that there is reason to believe that agriculture will never again be so completely at the mercy of circumstances and predatory interests as it has been in the past.

Loosely, these organizations may be classed as follows: First, those which have as their object greater economy in production. Thru the leadership of the County Agent and Vocational Schools, farmers are co-operatively applying scientific principles to reduce costs. The boarder cow and the unprofitable hen are being gradually eliminated. Fertilizers and lime are being bought and applied with greater intelligence and at less cost; intelligent control of pests and plant diseases produces larger returns per acre and per man; the judicious adaptation of machinery and other equipment tends to reduce costs.

Second, the rapid formation of selling organizations is most encouraging. While this subject has been preached for a generation, comparatively little was accomplished until necessity forced actual organization. The Grange, the Farm Bureaus, Farmers' Unions, some state departments, and other organizations are doing the pioneer work in the formation of such co-operative associations. The one thing yet needed and which must be obtained speedily from Congress is the unquestionable legal right to form and operate such organizations.

The third encouraging factor in the organization movement is federation. Local organization alone can accomplish but little until it becomes a component part of a state and national organization. Altho national federation of farm organizations is, as yet, far short of being complete, the work has advanced far enough recently to indicate what can be accomplished when it is perfected. Never before have Congressmen given such sympathetic attention, and never before did politicians listen to farmers' demands at nominating conventions as they did this year. One of the first and most important things which the new Congress will take up will be legislation intended to favorably affect agriculture. This is primarily due to the power of organized influence.

While the work of organization is progressing most encouragingly, there are some things which need remedying. For instance, a great deal of the so-called organization is more theoretical than actual. Self-appointed leaders with little or no real organization behind them should and can be crowded off the platform by bonafide representatives of strong, active bodies. After it can be shown that the rank and file of farmers belong to some one or more local organizations, and that they have duly elected national spokesmen, thru federation, it will not be possible for irresponsible extremists or reactionary conservatives to pose as mouth pieces for farmers and get away with it.

We recite the above as our confession of faith in the future of agriculture. We see no reason for pessimism even if conditions appear gloomy upon a superficial view. The finances of our nation are fundamentally sound; there is no oversupply and no dearth of demand; deflation is progressing gradually, if unevenly, and the time is fast approaching when all prices will be figured by using a common denominator. And lastly, the most encouraging thing is the mobilization of farmers for the purpose of more economical production and distribution, and to secure equality of influence with other classes in commercial and political matters.

Our Washington Letter

The sixty-sixth Congress convened December 6th for its final session, with the Senate galleries packed in anticipation of the appearance of President-elect Harding on the floor. "We are facing no easy task," said the President-elect in a brief address to the Senate. "We have our full part in the readjustment of human affairs after the world tumult. We have our tasks at home, we have our part in the inevitable work of the civilized world. I am sure that the necessity of wise solution will inspire us to work together, to take common counsel, to be tolerant of one another and give the best which is in all of us to attain the ends which become our republic at home, and will maintain its high place among the nations of the earth. With propriety I cannot venture upon any suggestions now, even though I am speaking as a member of this body. Three months of the present administration remain, and I would have House and Senate join cordially in making them fruitful rather than wasted months."

* * *

Both the Senate and House were prepared for an unusually busy session, with agricultural relief legislation in the forefront. For nearly a week before Congress convened, daily conferences on the the farming situation were held in the Senate office building. All phases of remedial legislation were discussed at these conferences. The outstanding features were the testimonies of Secretary of the Treasury Houston and Governor W. P. G. Harding of the Federal Reserve Board.

Secretary Houston said he expressed the view soon after the armistice that there would be a recession of prices, and in the January following he made a statement warning the farmers and all others to prepare for just a situation as we now have. He does not now know of any feasible means that the treasury can adopt to relieve the situation that would not create a worse condition. "The facts show," he said, "that there has been no contraction of credits, also that there has been a great increase in exports during the present year.

* * *

Replying to Senator Norris of Nebraska as to how the foreign countries could be financed so they could buy more American farm products, Secretary Houston said he doubted if the War Finance Corporation would help. The law says this corporation shall make loans to firms engaged in exporting. When the corporation was functioning, such concerns as the General Electric Company and the International Harvester Company, were about the only ones in position to take advantage of the aid provided, and these are the people who would get most of the benefit now by the rehabilitation of the War Finance Corporation, unless exporting firms handling farm products are organized. The $12,000,000 exporting company in the South and the $100,000,000 corporation now being organized in Chicago, also the $22,000,000 live stock pool, were mentioned as being a movement in the right direction.

The Secretary of the Treasury did not think that the government should make loans to foreign countries on security that business would not accept. He added that nothing more fateful could happen to the nation than to embark on an unknown financial policy. "If we were to undertake some of the schemes suggested we would go to a condition with which other nations are confronted."

* * *

Governor Harding of the Federal Reserve Board declared farmers need have no fear that the banks would not do their part and carry over loans on staple crops for which there is no market, provided the farmers would make a fair statement of their condition to the bankers. He quoted figures showing there had been no restriction on discounts of agricultural paper. The present situation on the farms was compared to a crop failure, which is seriously felt, but leads to no general bankruptcy.

"Would it not be the best policy," Governor Harding asked, "for a farmer to sell a portion of his products, and hold the balance?" He could repeat this process, gradually marketing his crops. "It is impossible to do business with Germany," he said, "because her reparations had not been fixed. Germany had signed a blank check that had not been filled in."

Referring to Senator Hitchcock's proposed bill for the relief of the cattle raisers, Governor Harding said the cattle business stands on a different basis from anything else, and demanded relief which would benefit everybody in the nation. Senator Hitchcock's bill provides for the enlargement of the powers of the Farm Loan Banks to enable them to make direct loans running as long as two years to cattle men. This would result in great good and would relieve the banking situation.

Governor Harding opposed the plan of issuing certificates on wheat in warehouses. He argued that the rate per bushel loaned would set the price for the wheat or other products; that the loan value and commodity value of a product are inseparable. In answer to the charge of profiteering by the Federal Reserve Banks, Governor Harding gave figures showing that these banks had earned 6.9 per cent on their capital stock of $100,000,000 and the reserve balances of banks amounting to $1,800,000,000.

* * *

While Secretary Houston and Governor Harding professed sympathy for the farmer in his present plight, it was plainly evident that the farmers need not expect any remedial action on the part of the Federal Treasury or the Federal Reserve Board. Congress will undertake to pass several bills aiming to help the farmers in securing financial aid and marketing their products, but there is little expectation that any measure will receive President Wilson's signature which will in any way change the present financial policy of the administration.

* * *

Two bills were introduced by Senator A. B. Cummins of Iowa, relating to the agricultural situation. One amends the farm loan act so as to permit the extension of short-term loans to farmers on agricultural products. The other requires the Department of Commerce to make immediately available reports from commercial attaches as to agricultural conditions in foreign countries. A bill introduced by Senator Hitchcock of Nebraska permits the use of between $60,000,000 and $70,000,000 profits earned by the Federal Reserve Bank system in loans to farmers. Representative McLaughlin of Nebraska has introduced an amendment to the Federal Farm Loan act authorizing an increase to $10,000 in the maximum of loan to any one borrower and where the money is intended for acquirement of lands for farming purposes the limit is placed at $25,000.

* * *

A bill imposing tariff duties of 45 cents a bushel on imports of wheat and $1.80 a bushel on flour was introduced in the House by Representative Tincher of Kansas and a similar bill was introduced in the Senate by Senator Capper. Representative Halvor Steenerson of Minnesota has a bill in the House imposing a tariff of 30 cents a bushel on wheat, $1.35 a barrel on flour, and 30 per cent advalorum on other wheat products. Congressman Steenerson also introduced a resolution in which he calls upon the Federal Trade Commission to investigate alleged violations of the anti-trust laws through the operations of foreign market governments in the grain markets. "One of the causes for the recent slump in the price of wheat," according to Representative Steenerson, "was the dumping upon our markets of millions of bushels of Canadian wheat and several million barrels of Canadian flour free of duty. On account of the difference in exchange this gave the Canadians a bonus of 15 to 30 cents on $2 wheat. It is a clear case of manipulating the market by artificial means and the Underwood law which allows wheat and flour to come in free has been used as an instrument in this manipulation."

* * *

Senator Smoot of Utah has introduced a bill placing an embargo on wool and Representative Sinnott of Oregon has a bill putting an embargo on wool, including retroactive duty from December 6, 1920. If Senator Smoot's bill becomes a law, sections of the act of October 3, 1913, levying duties upon articles manufactured from wool and admitting the importation of wool and wool waste free of duty, will be suspended and the importation of wool, manufactures of wool, wool wastes and wool on the pelt will be prohibited until such time as the act shall be repealed.—Elmer E. Reynolds.

HARRISBURG LETTER

Eliminating Duplication.—Plans for co-ordination of agricultural education work the State of Pennsylvania and various agencies have been conducting for several years and prevention of overlapping are upon a fair way to be worked out between Dr. Thomas E. Finegan, state superintendent of public instruction; Secretary of Agriculture Fred Rasmussen, and State College officials. The first of a series of conferences to bring about avoidance of duplication has just been held and some time will be devoted to finding out just where the work does conflict or is duplicated.

Rural Work Speeded Up.—The new assistants to Dr. L. L. Driver, head of the bureau of rural education, have taken up their work and some will address meeting the latter half of the month. A number of school districts have asked for the advice of State authorities in regard to consolidation of schools and the action of granges in favor of lengthening of the school term and for consolidation of schools where it can be worked out reasonably is to be followed up by State authorities. A special report is being made up for the Governor on the results of the first year in the rural education branch. Dr. Finegan is hopeful that propositions for merger of schools will receive close attention at educational meetings during the winter.

Harmony to Reign. The storm clouds which hovered over the opening days of the Legislature seem to have disappeared and all hands are now discussing what might have happened if the people in control of the destinies of the Republican party in Pennsylvania had lost their heads at a time when the majority in both branches is beyond records. Many county leaders and men interested in party success have been heard from against starting anything when there are some strenuous county battles ahead next year and the great mass of women voters to be heard from.

Funds for Agriculture.—Assurances are understood to have been given that in the scheduling of measures to pass the bills for advancement of the agricultural work begun last year under 1919 legislation are to go thru and liberal appropriations will be made for the department's various bureaus. The inspector service is to be stiffened up and the surveys continued, with results being placed before the people for their own determination.

Pennsylvania Praised.—Pennsylvania's plans for making about 5,000,000 acres of cut over land, cleared of trees and subject to erosion and growth of weeds and useless trees and bushes, have been highly commended here by the first national gathering of practical foresters held here at the invitation of Commissioner Gifford Pinchot. The fact that Pennsylvania stands second only to New York in extent of state forests, but that it has a far better business arrangement in that the Keystone State can sell the products came out during the week. The greatest attention was given to the fire protection proposition and the men in charge in this state will start to develop their communities and to get farmers interested, every woodlot being included in the supervision for protection.

Attendance is Small.—Reports made on the farmers institutes show that attendance is nothing to brag of and if an improvement is not noted soon there may be a material reduction of the number held. The early meetings were held in northern counties, but the weather conditions permitted field work and the meetings suffered.

Standard Barrel in Force.—The State Department of Agriculture has given notice that it will put the standard barrel act into force on the sixteenth and it will be followed up. Enforcement was made optional with the states.

To Grade Potatoes.—Plans are under way whereby the Department of Agriculture will utilize what it learned in the survey of potatoes and grade potatoes. Notices will be prepared showing where immune potatoes, those of first and second grade can be bought so that farmers wishing to change or try new brands can obtain them under what may be something like a state supervision if not guarantee.—Hamilton, Harrisburg, Dec. 13.

NEW YORK LETTER

State Potato Growers Expanding.—The New York State Potato Growers' Association is rapidly forging to the front as producers of certified seed and will be reorganized at its annual meeting in Syracuse this week. A business amounting to $300,000 was done in 1920 and the necessity of a central marketing organization is so apparent that sectional meetings will be held to hear the growers' opinions. From a membership of fourteen in 1914 the association has grown until it now numbers three hundred; two hundred of whom have certified fields and also have a committee which has been watching the Michigan potato marketing methods.

Personnel of Legislature.—Lawyers will again be in the majority in the Legislature of 1921; of a total of 153, there are 53 legalites and 31 farmers which is the largest number known so far.

Syracuse Honored in Judging.—To Professor Duck, of the Syracuse Agricultural College, who thru his efforts in training the five men who entered the National Dairy Show judging contest, belongs great honor. In competing with teams from 22 agricultural colleges of the United States, Syracuse won high honors, the team being awarded scond prize in Percheron horse judging, altho it was their first experience at a national show.

Co-operative Honey Marketing.—The state bee-keepers have organized as the Empire State Honey Producers' Exchange to promote efficient marketing of that crop. Delegates will be sent to the national convention to be held in the near future.

Quotations on Milk Products.—These quotations now seem to differ widely from the prices obtained here and in London: Sweet condensed milk which now costs about $8.70 per case to produce instead of the previous price of $11 per case, is now being sold in London for $8.40, one buyer securing evaporated milk at $4.20 per case, which at this price the producer received $2 per cwt. of 3 per cent milk. In New York City where last June the price of powdered milk was 27 cents, it is now quoted at 12 cents, but can now be bought at 8 or 9 cents per pound.

Quotations on Dairy Cattle.—With the varied prices of cows of the same grade in the various parts of the state the Dairymens' League will endeavor to assist the dairymen in securing for them actual quotations in all parts of this and neighboring states, as the difficulty in grading cows has been a big handicap heretofore. To produce a standard a weight classification may be adopted, but there is varied opinions on this subject. All kinds of dairy stock, from about four regions will be considered and all dairymen are requested to voice their sentiments of the proposed plan. Practically all shipments of cattle to eastern markets have ceased and the quotations used will be one farmer's price to another.

Big Dairy Meeting.—The Dairymens' League meeting to be hed in Utica this week will perhaps be the most important ever held. The dealers are exerting every effort to lssen the faith of the League members in the pooling plan, which is the very best proof that above all things, and that it is the safest course possible for the dairymen to adopt. A stormy session is expected when the resolutions come up as the enemies of pooling desire the contracts changed but Chenango County, which leads the state and the majority of the Farm Bureau's approve the present contracts.—M. G. F.

NEW JERSEY NEWS

Urges Wood Burning.—A more general use of wood for fuel, especially in the rural districts, when it can be produced at home or purchased nearby at a reasonable price, is being urged by State Forester Alfred Gaskill as a means of relief from the present fuel situation brought about by the scarcity and high price of coal. To this end, one thousand copies of a publication styled "Wood Fuel," have been sent to all of the county agricultural agencies in New Jersey, as well as the county boards of agriculture and granges. The publication was accompanied by a request from Mr. Gaskill for the interest and aid of the organizations in the movement. The State Forester stated from his offices in the Department of Conservation and Development here, that forest and woodlot owners can effect a great saving, and, at the same time, improve their woodlands, by utilizing "the enormous surplus of cordwood, which goes to waste annually," while he added that "by the home production of cordwood, a farmer saves from $5 to $6 of the cost of a ton of coal at present prices and also provides profitable employment for his help and teams during slack time. The woodland is improved by removing inferior and crowded trees and giving the remaining ones opportunity to propery develop.

Convict Labor Poor.—State Highway Engineer Thomas J. Wasser does not think that convict labor from the New Jersey State Prison here is as efficient in the construction of the State Highway System as "free" labor, and he therefore will urge that none of the inmates of the institution be used in the operations of road building in South Jersey and other parts of the state in 1921. Nearly one hundred convicts have been returned to the prison from the road camps at Budd's Lake and West Portal because it was decided by the State Highway Commission to discontinue road operations for the remainder of the winter. The views of Mr. Wasser have been conveyed to the commission on the convict labor situation, and the members of the board are in accord with his ideas.

Firewarden is Named.—State Firewarden C. P. Wilber has announced from his office here the appointment of Leroy S. Fales to the position of Division Firewarden in the North Jersey Division.—Kelly, Trenton, Dec. 11.

A healthy Holstein, the She is a 3-year-old junior champion, with a seven-day score of 581 pounds milk; 29.3 lbs. butter fat.

Keeping Tabs on Health Pays

THE whole scheme of profitable dairying leads back to the subject of health. No way of escaping it. A cow is profitable or not, according to the degree of vigor of her milk-making organs.

Watch the milk-yield closely; it's the barometer of health. Reduced milk-flow means the presence or approach of disease.

Each year more thousands of dairy farmers are learning the value of the simple Kow-Kare home treatment—both as a preventive and reliable aid in relieving diseases of the genital and digestive organs. Barrenness, Abortion, Retained Afterbirth, Scouring, Lost Appetite, Bunches can be kept out of your dairy with the aid of this great cow medicine.

Give Kow-Kare a trial; feed dealers, druggists and general stores sell it—70c and $1.40 packages. Write for free book, "The Home Cow Doctor."

DAIRY ASSOCIATION COMPANY
Lyndonville, Vermont

NOTE: The trade-mark name has been changed from KOW-KURE to KOW-KARE—a name more expressive of both the PREVENTIVE and CURATIVE qualities of the remedy. There is not the slightest change in formula or manufacture.

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What Milk Does For Children

Still greater evidence is now at hand to show the wonderful value of milk. This evidence comes from the results of experiments conducted by the great authority, Dr. Emerson, of Boston, in conjunction with the city schools of Chicago, the McCormick Memorial Institute of Chicago, and the National Dairy Council.

Thousands and hundreds of thousands of boys and girls have been found, on careful survey, to be physically unfit and mentally unreceptive to school work.

Chicago schools show approximately 33 per cent of their boys and girls as being 7 per cent or more below normal, many thought he had hopeurally reflects on their school work.

When Dr. Emerson first went into the Chicago schools and picked out several dozen boys and girls, the worst he could find, who were in many cases 25 to 40 per cent below normal, many thought he had hopeless cases. But he didn't. He knew the reason for the condition of these children and he knew the way to bring them up and "over the top." Strange, but true, these children were from well-to-do families; in many cases the child was the only one in the family.

Dr. Emerson is emphatic in saying that less than three per cent of the cases of malnutrition can be traced to poverty, the 97 per cent being the result of sheer neglect and ignorance on the part of the parents.

The children were immediately placed under supervision, and each given at least a quart of milk a day. Some were required to have mid-day lunches, properly prepared. Every child was weighed regularly, a record was kept, and a graphic chart showed how far each child was below normal when he began and how rapidly he gained and finally reached normal. The results were astounding.

One case was a boy, weighing 86 bs. while he should have weighed 134 lbs., who became normal, going "over the top" in thirteen weeks.

Most of the children went over in six to eight weeks.

Occasionally their progress was stayed by some physical defect or disease—such as diseased tonsils, which, when removed, allowed the children to continue gaining.

All this, says Mrs. Ira Couch Wood, in charge of child nutrition work conducted for the McCormick Memorial Fund, resulted in a similar increase in school efficiency; the children studied better, they were really interested, they grasped the work more rapidly, and they displayed alertness of mind never before manifest. Indeed, it was an inspiration to see them unfold; once so listless and dull, now so apt and eager.

And to think there are 6,000,000 such children in this free land of America today—children who could be "shining lights," and who could be a power for civilization—but who are held down by the iron hand and submissive power of ignorance.

Proper food means healthy boys and girls. Health is wealth, and health belongs to every child in this land today.

Milk is fundamental. It is also economical (for 1 quart is equal to 8 eggs in food value). Then why not use it? If it were put up in medicine bottles, it would sell for a dollar a bottle, and there would be no end to the demand for this vital food. The Milk Way is the Health Way—Follow it. Dr. Emerson has found that milk is indispensable.—National Dairy Council.

VALUE OF TANK HEATING

Usually a tank heater is well worth its cost, provided the tank heater is kept in the tank instead of in the corncrib or some other place where it is of no service. Also it will have to be supplied with fuel and the owner will see that it gets some attention each day during the period it is in use if he expects to get much benefit from his investment. Sometimes the tank heater is of as much cash value to the owner as the tank itself, especially if it is a tank that can be easily burst by the action of frost. In many cases the tank heater will more than repay the amount invested in a single winter in this way alone, to say nothing of saving the disagreeable job of clearing the tank of ice each morning as is necessary when no heater is used.

Livestock of all kinds thrives much better during the cold weather if furnished with water well above the freezing point than if given ice cold. Milk cows will drink more water and give more milk during cold weather if the temperature of the water is kept near normal. Did you ever notice how the horses come into the stall all tucked up and shivering after a draft of ice cold water with the temperature hovering around the zero mark? It takes much more heat-producing feeds to restore a normal condition than if the water had been warmed during this kind of weather. Sheep and hogs also keep in better condition on less feed if their supply of drinking water is warmed.

To get the best results from a tank heater it should be in use every day during the winter season. Aside from its value as a safety first measure for the tank, the heater will be of but little use to the livestock if they are given warmed water for a few days and then allowed to fill up on ice-cold water the next day. In fact, I think it is better not to warm the water at all during the winter than to handle it in this way. Most tank heaters on the market hold a sufficient amount of fuel that they need attention only once or twice per day, and can be closed up so that they will keep fire all night. If properly handled most tank heaters are safe so far as fire is concerned for use anywhere except a tank inside the barn.—Daniel Prowant, Putnam Co., Ohio.

The only influence worth having is the influence you yourself create.

You have no idea how big the other fellow's troubles are.

WINTER CARE OF COWS

Unless the equipment is satisfactory it is more difficult to water cows properly in the winter than it is to feed them. Individual watering cups are the best. They insure a supply of water before the cows at all times. It is not necessary for them to drink a large quantity at once and then go thirsty for several hours before being turned out to the tank.

If an outside tank is used it pays to use a tank heater. The cows will drink more water when it slightly warmed and the heater keeps the tank from becoming a mass of ice. If the path to the tank is slippery it pays to scatter a few ashes on the ice so the cows will not slip. Often cows will hesitate about going down an icy incline and refuse to drink until excessive thirst forces them to make the trip.

Even with a tank heater the cows may not obtain enough water in the winter to produce their maximum amount of milk. Then it pays to use a few galvanized pails and about twice each day place a pail of water in the manger of each cow. It takes time but if there is time for such work it is often profitable in the winter. The pails can be used until there is capital available for a modern watering system.

A box stall is of great practical value when cows are to freshen. It can also be used as a hospital if such a place is needed. Small box stalls for calves are a great help in caring for the calves during the winter. They should have metal stanchions so that each calve will learn its place at feeding time. This saves a lot of crowding and jostling. And the stronger calves do not obtain the bulk of the feed while the others go on short rations.

If there is plenty of straw it never pays to skimp on the bedding during the winter. The cows and calves do better if they can rest on a thick mat of straw. Then they keep cleaner and this means a better quality of milk. It is economical to produce as much manure for the fields as possible and plenty of straw is a help in absorbing all of the liquid manure. The more straw that can be run thru the barn in the winter the greater the quantity of fertilizer available for the growing of crops. A litter carrier is a great help in handling the manure quickly.

Ventilation is a great help in keeping the cows healthy during the winter. The barn that is close and damp is unhealthy for the cows. A damp air always seems more chilly than a dry cool air. Ventilation helps to keep the barn in good condition for the cows even in the coldest weather and also makes it a more pleasant place for the farmer to work.

Never neglect salting the cows in the winter. A salt block in the barnyard is an easy way of insuring a supply of salt at all times. If a small piece of salt block is placed in each manger it will remove the necessity of supplying salt and the cows will use it to better advantage if they can take a little at a time instead of a large amount followed by a scarcity. If salt is supplied each week from the barrel it pays to make it a regular duty on the same day of the week.

Cows need exercise in the winter. They keep in better health if they can go out of the stable once each day and walk around the barnyard. One dairyman in our section places a couple of empty barrels in the barnyard and the cows seem to get much needed exercise by pushing and butting the barrels around. The cows eat and drink better.—R. G. [illegible]

Over Another Threshold

SOON you will put the calendars of a new year up on your walls. You have weathered the labors of the past four seasons—with what benefits and damages you recall full well. Now the cycle of a new year looms ahead, and we must prepare to gather the fruits of 1921.

It is a time when conservative manufacturing enterprises and business houses are reviewing the past, taking stock of resources, and building future campaigns. Leaks are stopped, needs are reckoned with, and plans are made with extreme care.

Winter is the best time in most sections for complete farm inventory, for overhauling machines and making repairs, for accurate reckoning of profit and loss, for planning crop changes, for discarding old habits and considering new methods.

Every farmer knows this. It is good to see that there is more and more definite planning of full year's work at the close of every December, on the farms of America. It is so easy a matter to slide through the comparative resting period of Winter, and then Spring with its hundred duties bursts forth and finds many important matters and details unattended to.

We are glad to note this trend toward business-farming because we hope to be allied with Agriculture many more years and because our interests are so closely mingled with the interests of the farming world. So then, while we are setting our own house in order for 1921, we pause to publish the hope that you, the reader, may set forth into a new year of farming enterprise with all plans laid for a most profitable twelve-month.

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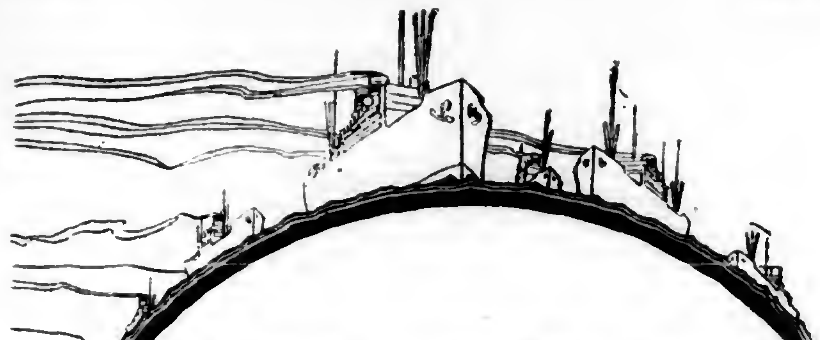

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"Dockash"
Steel Ranges

are different from ordinary ranges in many ways. They are made of steel, not of cast iron and have a very practical as well as economical heating principle.

It will pay every farm wife to investigate *Dockash* Steel Ranges. Made both right and left hand, with and without reservoir. We have made them for over 50 years, of the best material and workmanship it is possible to put into a range.

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SCRANTON STOVE WORKS, Scranton, Pa.

HORTICULTURE

Controlling Apple Blotch

J. P. STEWART

In sections where it is prevalent, one of the very worst diseases affecting the apple is the true apple blotch. This is not the ordinary sooty blotch or fly-speck fungus, which is generally found on trees growing in low ground or in the lower portions of trees that have been insufficiently pruned and sprayed. The latter disease is bad enough, but it isn't in the same class with the true apple blotch, either in its effect on the fruit or in its special difficulty of control. Like bitter rot, the true apple blotch is worse in the more southern apple-growing districts, such as the Ozarks and southern Illinois and Indiana, but it has been gradually working northward in those sections; and it is appearing in the southern part of Pennsylvania and adjacent sections with sufficient frequence to justify considerable attention on the part of all concerned.

When the true apple blotch gets well established in an orchard it is likely to turn the entire crop into cider stock or worse, in spite of the regular applications that are usually made in this state, and regardless of the thoroness with which these applications are made. It also attacks the younger limbs and twigs, forming objectionable cankers, from which the new infection develops during the following season. Considerable work has been done on the control of this disease, and vast quantities of spray material and labor are annually employed in the campaign against it, in the infested regions—and frequently with very disappointing results. I was recently in several orchards, each of which had received at least five spray applications since the bloom, and it looked as if fully ninety per cent of the fruit was so badly affected that it would not even make good cider stock. Such a result, if very frequently repeated would be likely to take the enthusiasm out of the best of us, and the full solution of the problem is not yet in sight.

One of the most recent scientific campaigns against the disease has been started by the Illinois Experiment Station, and it is to be hoped that a real solution to the problem will result. Up to the present time contrary to much opinion and expectation, they have not been able to check the disease to any visible extent with any kind or quantity of spray material applied on the twigs during the dormant season. They have also found that during the last few seasons at any rate, no infection of the fruit occurred until seventeen days after the petals had fallen and that practically all infection took place between that date and about five weeks after the fall of the petals.

As a result of these facts concerning the infection period the present spraying schedule recommended by the Illinois Station for blotch control consists of four thoro applications, one week apart, beginning two weeks after the fall of the petals. As to materials, preference is now given to lime-sulphur solution and lead arsenate, as it has been found to be practically as efficient as Bordeaux mixture in checking the blotch, and it causes far less spray injury, in the form of russetting the fruit, than the latter mixture, especially preferred now is about two and a half gallons of the best grades of commercial lime-sulphur concentrate in each hundred gallons of spray, which would give a density of about 1.0075 on the specific gravity hydrometer for the diluted material. We suspect that solutions at least a fifth stronger could be used with safety and advantage in this state.

With the use of this material regularly each year, in thoro applications at the times stated, a progressive increase in control is being noted, and it is thought that eventually complete control can thus be obtained even on old and badly infected Oldenburg trees which are among the most susceptible. It is hoped, however, that the control can be still further simplified and increase in effectiveness, as both of these features could stand some improvement, over the present attainment.

FAMOUS APPLES ORIGINATED IN MASSACHUSETTS

Since Governor John Endicott brought the first seedling apple tree to America, thus linking Massachusetts directly with the best pomological lineage of the old world, the Bay State has been a traditional source of fruit development and improvement. Some of the most universally grown and admired of American fruits originated in Massachusetts before the Revolution.

The Department of Pomology of the Massachusetts Agricultural College has compiled a list of 22 varieties, still of importance, that had their origin in this state since 1630. The Roxbury Russett was first grown in Roxbury before 1649. The famous Baldwin was developed in Wilmington about 1740. Before 1796 the Seek-No-Further had become established in Westfield. Williams Favorite is also credited to Roxbury growers before the Revolution, and by 1800 the Porter had spread from Sherburne, the Hunt Russett had added to the glory of Concord and the ancient Hightop, that still lingers in neglected orchards on the Cape, had been transplanted from its colonial birthplace in Duxbury.

Other important varieties and their dates of origin are:

Tolman Sweet, Dorchester, 1822; Hubbardston, before 1832; Benoni, Dedham, 1832; Danvers Sweet, Danvers, before 1832; Pumpkin Russett before 1832, Mother, Bolton, 1848, Sutton Beauty in Sutton, before 1848; Minister, Rowley, before 1850, Palmer Greening, Sterling, before 1855; Jacobs Sweet, Medford, about 1860. The Lyscom, Southboro, was an old native variety, and the Murphy, Salem, the Haskell, Ipswich, the Fall Orange, Holden, and the Moore Sweet, Concord, are Massachusetts born, birth dates forgotten.

FRUIT TREES ALONG THE HIGHWAY

I picked up a paper recently, and the first article that atracted my attention was "Why Not Plant Fruit Trees Along the Highways, instead of Poplars, Maples and the like, as so many do." But I did not agree with the idea and would say to all or any that should think of such a thing, "Don't Do It." My experience is they are a menace to the owner, as well as the highway, for, in a short time they are not only an eye sore, but a bone of contention to say the least. We have not only found it so at our home, but while we were taking a ride in the machine one afternoon, we saw some fine young apple trees on a man's place along the highway, and but a short distance from his buildings. When we got opposite, behold! there were four or five pedestrians, with small bags, stealing apples. The way they were breaking the limbs of those trees in their hurry, so as not to be caught, was a crime.

Now, I know, when the owner found it out, it would not (if he did before), make him feel charitable; but he would resolve then and there to never plant any more fruit trees along the highway. As for cherries, pears and nut trees, as was spoken of in that article, there is seldom much left; but the trunk, as the public molesters think nothing of breaking the trees to pieces in order to hurriedly get the fruit and nuts, and such trees soon make a disgraceful, ragged edging. If the maples, poplars, etc., are planted nicely they are a thing of beauty along the public highway. The planting of fruit trees along the highway sentiment seems to me like planting a mulberry tree near the cherry trees with the idea of filling the birds so as to keep them from the cherries. So the idea of fruit trees being planted may be to fill the public.—M. A. C., Newtown Square, Pa.

KILL THE CABBAGE MAGGOT

The cabbage maggot does serious damage to cabbage, radishes and cauliflower. To kill the maggots on cabbage already infected use carbolic acid emulsion. The stock solution is made as follows:

Dissolve one pound of soap in one gallon of boiling water, then add one pint of crude carbolic acid and churn the mixture hard until all are thoroly mixed.

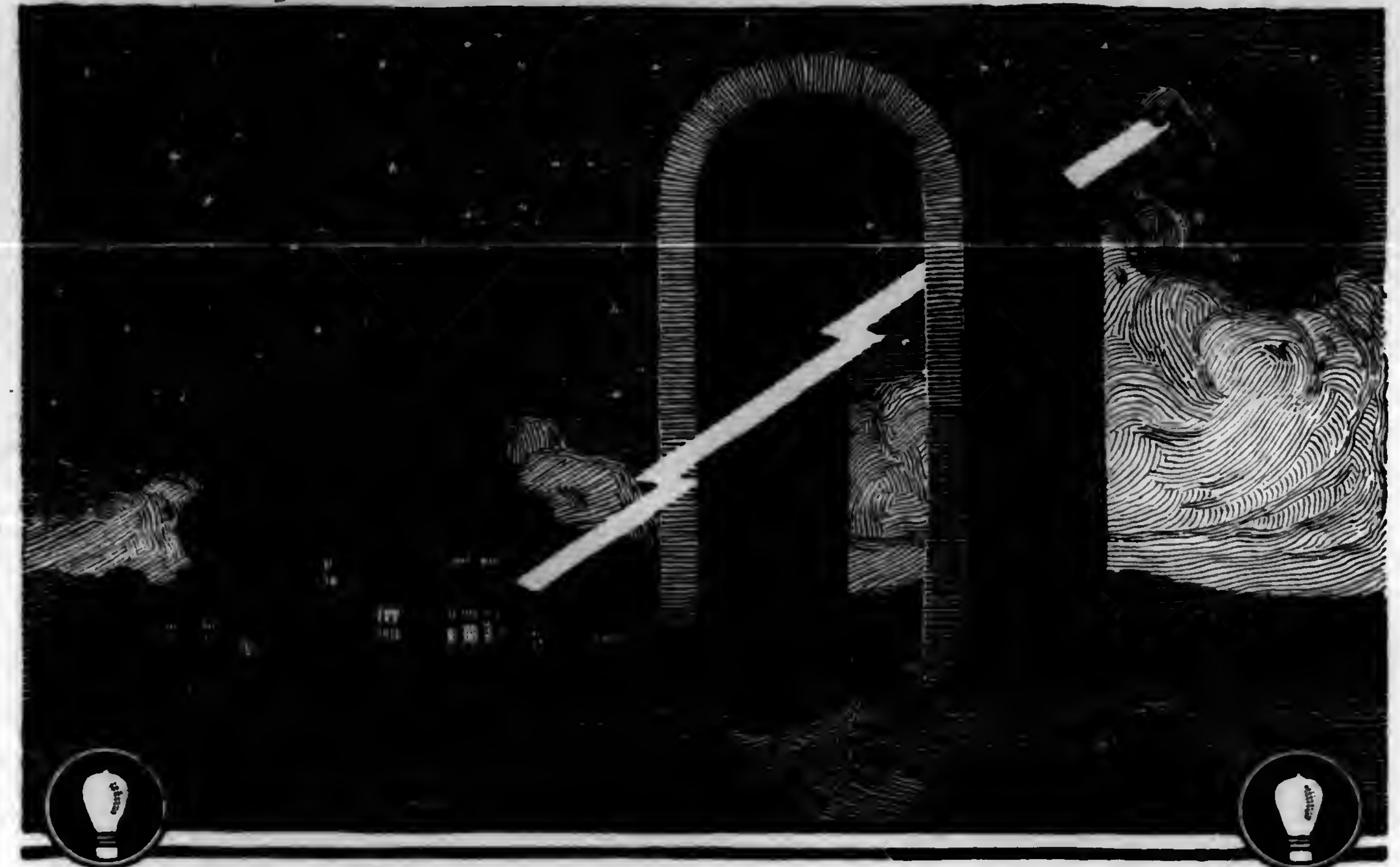
To Use—Dilute one (1) part of the above stock solution with thirty (30) parts of water and pour half a teacupful above the stem of each plant. Apply once a week until the four applications have been made.

This does not prevent the fly from laying eggs but it kills the eggs or the young maggots. Use at once in an endeavor to save infested plants.

SNOW IN BLAIR CO., PA.

The first snow fell here recently, but it has about all gone and the farmers are glad to see it go for corn is nearly all in the fields yet. It is a fine crop, running 100 bushels to the acre on good ground. There is still some cider making, yet there were lots of nice apples frozen on the trees. Eggs are selling at 80c doz. Turkeys, 65c lb., live weight. Oats, $1 bushel; corn, $1.50 retail. Cows are not selling as high this fall as last year.—H. M. McVey.

After all, you've got to give full, fair value, or you won't last.



BOSCH HIGH TENSION MAGNETO

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Altoona	Altoona Stor. Bat. Co.,	800-2 Chestnut Ave.
Beaver Falls	Elec. Service Co.,	700 Third Ave.
Bradford	Bradford Garage Co.	70 Chestnut St.
Butler	Hindman-Dumbaugh Co.,	118 Jackson St.
Chambersb'g	J. G. Schaff Electric Co.	71 No. Main St.
Chester	Thompson's Auto & Supply Co. Inc.	627 Edgemont Ave.
Coatsville	Bonsall & Wilson,	First Ave. & Diamond St.
DuBois	DuBois Garage,	117 So. Brady St.
Easton	Easton Electrical Devices Co.,	52 S. 2nd St.
Erie	LeJeal Cycle & Mobile Works	1721 Sassafras St.
Greensburg	John W. Patton	250 E. Pittsburgh St.
Harrisburg	Arthur P. Meyers,	1393 N. Third St.
Hazleton	Automobile Supply Co.	227 E. Broad St.
Johnstown	Smith's Fireproof Garage,	210 Main St
Lancaster	Exide Bat. & Ignit. Co.,	115 E. King St.
Lebanon	Lebanon Storage Battery & Magneto Co	11th & Cumberland Sts.
New Castle	Price Elec. Const. Co.	15 S. Mercer St
Philadelphia	Motor Parts Co.	1425 N. Broad St
Pittsburgh	Doubleday-Hill Elect. Co.	5952 Baum Blvd.
Pittsburgh	Doubleday-Hill Elect. Co.	719 Liberty Ave.
Pottsville	Elec. Repair Shop,	Howard Ave. & Railroad St.
Reading	Berks Auto Co.	511 Cherry St.
Scranton	Scranton Magneto Sales & Service Co.	521 Mulberry Street.
Shamokin	Shamokin Battery Service,	832 N. 6th St.
Sharon	Sharon Auto Elec. Service	43 Vine St.
Souderton	E. & E. M. Delp,	Franklyn & Highland Sts.
Uniontown	Tri-State Garage Co	70-6 E. Fayette St
Wilkes Barre	Johnston Motor Serv. Co.,	47-49 Barney St
Williamsport	Harer Wurster Co.,	W. Third & Hepburn Sts
York	P. V. Burgard.	47-49 Northwest St.

New Jersey

Atlantic City	George Hoefer Co	1821 Atlantic Ave
Elizabeth	E. H. Degenring & Co.	35 West Grand St
Hackensack	Hackensack Mag. & Bat. Sta.,	252 Main St.
Jersey City	Coleman Auto. Elec. Ser. Co.	867 Bergen Ave
Lakewood	Wallace Bros. Machine Works.	207-9 Monmouth Ave
Long Branch	R. V. Dorbeck,	611-15 Ocean Ave., W. End
Morristown	Victor A. Wiss & Bros.	10-12 Pine St
Newark	Tire Trading Co.	31 William St.
New Brunswick	Middlesex Bat. & Sup. Co.,	19-21 Dennis St.
Paterson	Reliable Magneto Repair Co.	29 Prince St.
Plainfield	Laing Mach. Auto Rep. Co.	410 Sycamore St
Red Bank	H. V. Dorbeck	Riverside & W. Front Sts.
Trenton	J. H. Hearnen	105-7 S. Warren St

New York

New York	Amer. Bosch Mag. Corp.	223 W. 46th St.

For Steady Power

Every farmer knows that a horse can't pull a load by jerking on the traces. There must be a steady, even pull or the load won't move.

Engines—like horses—must pull evenly or they won't work properly. Jerky operation—due to poor ignition—reduces the power of an engine. More than that—it wears the engine out.

Whether your gas engine drives a house lighting plant, the yard pump, or a big tractor, you need the full, hot, unfailing sparks of a Bosch Magneto to prevent misfiring. They fire all the gas in the cylinders—every time—and develop maximum power, economy and dependability in the engine. Four million users will readily testifv to that.

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Reading Bone Fertilizer Co., Reading, Pa.

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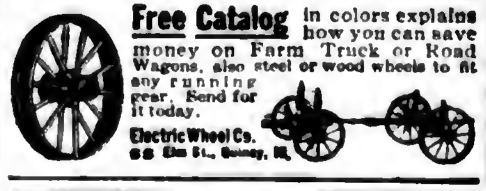

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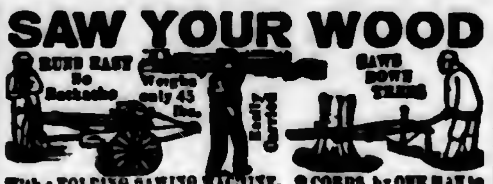

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the cheapest, handiest belt power you can buy. Then ask me about my LITTLE TWISTER Power Transmitter if you own a Ford or Dodge car.
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Seaboard

the south's newest great railway.

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The returns from dewberries and peaches often amount to $1,000 per acre.

In Florida farmers are making from $500 to $1,500 per acre growing oranges, grapefruit, strawberries and early vegetables for Northern markets.

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Along the Seaboard, in Florida, Georgia, Alabama, South Carolina, North Carolina and Virginia, you will find good roads, schools, churches—no extremes of heat or cold—direct connection with New York, Philadelphia and Northern markets.

Write for booklet and full information. Tell me whether you intend engaging in fruit or vegetable growing, livestock or general farming, and the State which you prefer.

J. M. Jones, General Development Agent
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Make 'Em Lay

Get thirty to forty percent more eggs from the same flock by feeding SEMI-SOLID BUTTERMILK. Numerous experiments absolutely prove that your egg yield may be increased by feeding this wonderful food and tonic for poultry.

Semi-Solid Buttermilk

(A Tonic as well as a Feed)

Semi-Solid Buttermilk is a highly nutritive poultry feed and the best tonic and conditioner. Contains no injurious preservatives. Stays fresh indefinitely. It will keep your hens laying all winter. Be sure to get the genuine Semi-Solid Buttermilk. Write or order today.

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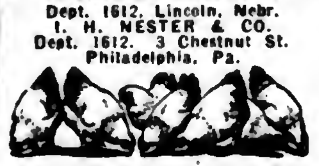


Money-Saving Pointers on Wall Papering

There are certain points to be remembered in hanging wall paper if best results are to be obtained.

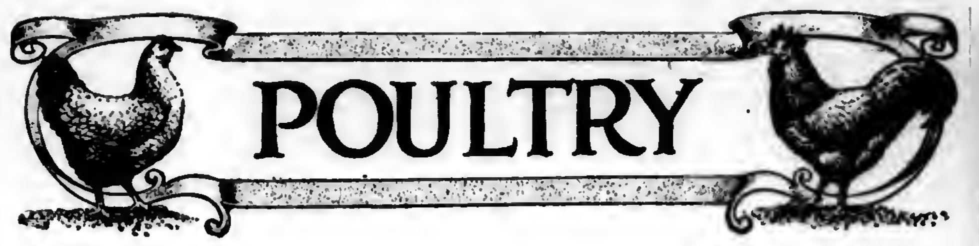
You should know the easiest way of removing the old paper, how to prepare the walls with the right sizing; how to neatly paste and trim; how to match stripes; how to hang the ceiling paper, and how much paper to order.

All these important points are now explained in an interesting book which the Charles William Stores, Inc., are now offering entirely free. The book also contains over 100 of the latest and most attractive wall paper patterns, many of which are offered at prices far below the ordinary. Anyone may obtain this big book by simply addressing a post card to The Charles William Stores, Dept. 27, New York City.

Yearling Holstein Bull For Sale

Sire is by a son of Katie Pietertje Paul Fift. [illegible] and his dam is a 21-lb. granddaughter of [illegible] De Kol 3072 [illegible] 2 year-old backed by [illegible] records. This bull is well grown, nicely marked and a fine individual. For quick sale [illegible]

H. R. FOSTER, Catatonk, N. Y



POULTRY

FEEDING QUERY AND ANSWER

Will you kindly give us some advice in poultry feeding and management. We have 175 S. C. W. L. pullets in one house (April hatched), which began laying some in August and increased gradually up to 70 eggs per day and then gradually declined to around 50 per day.

We are feeding the following ration:

Scratch Feed

400	pounds cracked corn
200	pounds wheat
200	pounds oats
50	pounds sunflower seed
50	pounds Kaffir corn
50	pounds crushed oyster shell
50	pounds mica gut.

Dry Mash

100	pounds alfalfa meal
100	pounds bran
200	pounds middling
200	pounds beef scraps
200	pounds ground oats (sifted)
200	pounds ground corn
50	pounds linseed meal
50	pounds ground bone (fine)
6	pounds fine salt.

Feeding System

Lights are used and at 5 A. M. 4 quarts scratch feed, 5 pounds semi-solid buttermilk and water are given. Noon, 4 quarts scratch feed, 2 gals., wet mash, made of dry mash, a little S. S. buttermilk and boiling water and 1 head of cabbage cut fine; evening, 2 gallons scratch feed. They have access to the dry mash at all times; also to crushed oyster shell, grit and fresh water. A dust bath is provided of sifted coal ashes and commercial louse powder; also a deep litter of clean straw. The birds seem rather inactive, but look the picture of health. Kindly suggest any change you think advisable that will improve the egg yield.—I. P. B., Franklin Co., Pa.

I think, in the first place, that your Leghorns started to lay too soon. It looks as though they had been forced as to development. Leghorns, that are hatched in April, ordinarily, do not begin to lay until September or October, and not until later, to any large extent. It would have been a whole lot better for you to have retarded their development when you began to get the first pullet eggs. When pullets' combs first begin to bud out, that is become large and red, and show indications of laying, and when the first pullet eggs are obtained, the dry mash should be taken away from them, and the birds fed only grain for about three weeks. The object of doing this is to increase the body weight and bring the birds into the heavy laying season in best condition, otherwise, a checked egg production is liable to result.

I think the amount of feed you are giving is about right, however, I believe the formulas of your scratch feed and mash could be much simplified, and you would probably get somewhat better results. I would suggest a mash similar to the following. First, a scratch ration consisting of 100 pounds each of cracked corn, wheat and oats, doubling the amount of cracked corn from about the middle of December to the first of April, that is, during the cold weather, and cutting down to the original formula again during the spring, each of wheat bran, middlings, corn meal, ground oats, meat scrap. The mash to be kept before the birds at all times, and the grain to be fed night and morning at the rate of 21 pounds per 100 birds from November to April, 10 pounds during May and June, 8 pounds in July, 6 pounds in August, and 5 pounds in September and October.

Where lights are used this season of the year, an additional 3 pounds of scratch per 100 birds should be fed, as soon as the lights are turned on. The rest of the allotment of scratch should be fed, 1-3 in the morning and the other 2-3 at night.

I would also suggest the use of epsom salts in the drinking water at the rate of one pound per hundred birds every three weeks during the winter. This to keep the birds in good condition and allow them to perform their functions properly. I would continue with your other methods as you have given them.—R. R. Hannas.

EXERCISE FOR THE FARM FLOCK

By this time all the laying hens are in winter quarters, and with eggs at the dollar mark, with good prospects of high prices until well in the spring, the poultryman who does not get his share of the eggs while prices are high has only himself to blame. The hens are thru the molt these December days, and with proper care the cackling chorus should be gaining in volume.

The other day a neighbor came to see me in regard to his chickens. He said they were apparently in good health and fat, but every now and then one would fall from the perch dead. They were not laying, either, and he grumbled at the perverseness of his hens in refusing to lay when fresh eggs were bringing 90 to 95 cents a dozen in the Reading market. The conditions that prevail on my neighbor's farm are similar to any one of a dozen in the immediate neighborhood. The hens are fed whole corn until they are surfeited with it and they do not get the necessary exercise to keep them in health during the winter months.

They spend the days in close, ill-ventilated houses, picking up whole corn off damp, germ-infested dirt floors morning and night, and the balance of the time they stand on one leg with the other tucked up close to the body to keep it warm. The dry mash is wholly unknown to these farmers and when one suggests it he is laughed at and told that their granfathers and their fathers before them fed their flocks a corn ration and they could see no good reason for a change. The Pennsylvania German farmer is usually quite set in his ways.

Hens need exercise in winter. If they do not get it they become lazy and unhealthy and produce no eggs when the price is at its highest notch. The hen should work for her grain ration to get the best results. It is not enough that grain is fed to keep her warm during the winter months. Hens of the heavy and mixed breeds—which include the average run of flocks on Berks county farms—that are maintained thruout the winter on a feed of whole corn thrown on the bare ground in the morning and again at night frequently suffer from liver trouble.

RUST'S EGG PRODUCER

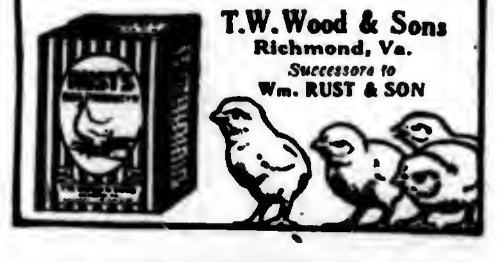
Makes Hens Lay Winter Eggs

Mix RUST'S EGG PRODUCER with their daily ration. Soon you have cackling red comb chickens laying more and more eggs each week.

RUST'S EGG PRODUCER tones up the egg producing organs. Used by professional poultrymen for thirty years. If your dealer can't supply you, send us his name and 35c and we will send you postpaid 1-lb. trial package.

Beware of Roup

One ounce of prevention is equal to a pound of cure. RUST'S ROUP POWDER kept regularly in the drinking water of the fowls during the Fall and Winter months will keep your flocks free from this dreaded disease.



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The Extra Eggs

will soon pay for one of these Automatic

Self-Heating Poultry Fountains and Heaters

keeps water at the right temperature day and night in the coldest weather and requires less than a quart of oil a week. Made of Galvanized Steel. A long felt want supplied. Every Hen-House needs one. Price of 1 Heater and 2 gallon Automatic Fountain complete $4.10. Also made in 3 and 4 gallon sizes.

Write for Circular and testimonials. Agents wanted.

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Equipped 82-Acre Farm With

2 mares, 3 cows, hogs, poultry, complete machinery, 100 bu. oats, 20 bu. wheat, 40 bu. buckwheat, 20 cords fitted wood, 25 bu. potatoes, hay, fodder, etc.; convenient city, dark loam fields, 12 cow spring-watered pasture; abundance wood; variety fruit, 2-story house, cement cellar, fine basement barn, poultry house, etc.; $1000; easy terms. Details this and equipped farm; $700 down; page 39 Strout's Free Illustrated Catalog Bargains 33 states. STROUT FARM AGENCY, 1122 BE, Land Title Bld., Philadelphia.

For Sale Big Stock and Grain Farm

188 acres. In Caroline Co., Md., 8 miles from county seat Denton. On state road leading from Ocean City, Md., to Wilmington, Del., Greatest bargain yet. For particulars write

EDWARD F. HUNT,
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FOR SALE—Pure Cane Stock Feeding Molasses. It reduces your grain bill, and increases production. Users recommend it highly. So will you if you feed it. 55-gal. barrels 25c per gallon. Shipped from points near you. ORDER NOW.

HOWARD BROTHERS,
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"The big Goodyear Cord Tires on our two motor trucks are helping us to reduce the high cost of farming. These pneumatics travel anywhere in the fields and, during threshing, enabled us to dispense with eight teams and eight drivers. We had had to pay the drivers of these teams up to $8 a day, in addition to the cost of the teams and the outfits. Also we have sold pasture and bought farm land in place of it. There are many other savings—of labor, time and money. Due to the quickness of the big Goodyear Cord Tires, we now can make more hay while the sun shines."—M. W. Bever, Farmer, Colby, Kansas, Rural Route No. 1

It is everywhere observable, as above, that the traction, cushioning and activity of Goodyear Cord Tires on motor trucks, effect large savings for farmers.

This traction overcomes handicaps of soft, slippery going, of weather and of grade which formerly caused hauling delay and added expense in all kinds of farming.

This cushioning safeguards loads liable to injury, shrinkage or waste when unduly jarred, and thus enables the sale of full quantity and quality at best prices.

This activity permits entirely economical hauling to and from motorized machinery, and by bringing more selling points within hauling range, often reduces marketing costs.

All these virtues of the big pneumatics are made most practical by Goodyear Cord construction which sinews them with unusual strength and endurance.

Farmers' reports on motorization and pneumatics will be mailed to anyone interested, by The Goodyear Tire & Rubber Company, Akron, Ohio, or Los Angeles, California.

GOODYEAR CORD TIRES

Genuine

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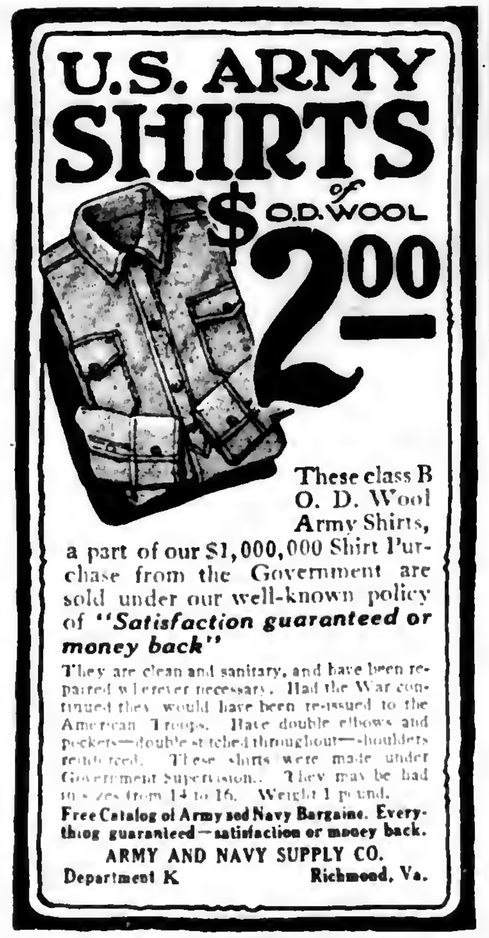
Aspirin

Always say "Bayer"

Unless you see the name "Bayer" on tablets, you are not getting genuine Aspirin prescribed by physicians for 21 years and proved safe by millions. Directions in Package.

Aspirin is the trade mark of Bayer Manufacture of Monoaceticacidester of Salicylicacid.


U.S. ARMY SHIRTS of O.D. WOOL $2.00

These class B O. D. Wool Army Shirts, a part of our $1,000,000 Shirt Purchase from the Government are sold under our well-known policy of *"Satisfaction guaranteed or money back"*

They are clean and sanitary, and have been repaired wherever necessary. Had the War continued they would have been re-issued to the American Troops. Have double elbows and pockets—double stitched throughout—shoulders reinforced. These shirts were made under Government Supervision. They may be had in sizes from 14 to 16. Weight 1 pound.

Free Catalog of Army and Navy Bargains. Everything guaranteed—satisfaction or money back.

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Best results from large spready cow hides for

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Trade with your hide buyer. Get a black hide. We make

ROBES

from all colors in the natural color. Catalogs, circulars, lining samples free.

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Custom Tanner, 30 Years' Experience

"ARECO" BLEND

COFFEE

BEAN OR GROUND

27c lb

This delicious household blend supplied to families direct from the wholesale roaster in 5-lb lots or more at

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HOUSEHOLD

HOME OCCUPATION FOR CHILDREN

A woman who overheard her small daughter discussing mothers with her playmates was gratified to hear her triumphantly conclude the argument with the words. "Well, your mother isn't such a play mother as mine!" Being a "play mother" evidently meant one who did not permit household duties to crowd out companionship with her children. The "play mother" had not known before how fully her efforts were appreciated.

Grown people sometimes fail to realize how children delight in their companionship. Every mother should employ care and insight as well as love for her child when she selects his occupations. Given an eager desire to enter the child's world, he will welcome her with countless suggestions. It is often the mother's privilege to modify these ideas, to make a quiet occupation more attractive than a noisy one, to offer materials that are large and easily handled when little fingers show signs of restlessness, or to direct active games when repression becomes unkind.

If limited to the simplest of materials with children, I should choose paper. Used with pencil, scissors and paste, it has limitless possibilities, and to adults who puzzle their way thru toy departments, I should say, "When in doubt, buy paper." Colored paper, cut in various sizes, a large, plain tablet, the child's undisputed possession, the wrapping of a kodak film pack, or any colored advertisements, will all be hailed with joy. One four-year-old was made happy for days with sample coffee wrappers, bright colored and glazed. The little child should have the opportunity to experiment freely with new material, expressing his own ideas; he should also have suggestions from the mother as he needs them and her appreciation of every achievement. Child direction and adult sugestion should be wisely balanced in order that the child may make the greatest progress.

For more active play, there are games which can be carried on with only a little help while the mother is busy. The simple hiding or guessing games can be played by very young children. One game which trains in observation consists in placing different common household objects such as a pencil, a thimble, a spool, scissors, etc., on a tray, covering them, then allowing the guesser a brief glimpse, after which he is to tell what he has seen. It is wiser to begin with two or three objects, increasing the number with each turn.

Physical feats also fascinate children. I recently saw a small girl amuse herself for an hour walking away from a full length mirror with a block balanced on her head. Each time it fell she marked the spot, then began again at the mirror, watching the block as she backed away. The same little girl has her happiest play times being tossed and swung by her father, "walking wheelbarrow," and various improvised feats being equally entertaining to both.

Why not substitute an extra fifteen minutes of games or stories for the more elaborate "treats" in offering rewards? Is it not an ideal worth striving for to be considered a good "play father or mother?"

Parents may find the following books helpful: "Play Life in the First Eight Years," by Luella Palmr, published by Ginn & Co., Boston, Mass.; "Play in Education," by Joseph Lee, published by McMillan, New York; "Mothercraft Manual by Mary Reed," published by Little, Boston, Mass.

The National Kindergarten Association, 8 West 40th St., New York City, will furnish further information about directing children.—Alice Wingate Frary.

A Letter to Santa Claus

Dont expect poor work now to lead to brilliant work hereafter.

GOOD BRADFORD CO., PA., RECIPES

Cornmeal Mush

As I have no iron boiler, when I want to make cornmeal mush, I put the desired amount of boiling water in an aluminum kettle on top of the stove, salt it and stir in the required amount of meal. Then I set it in a large agateware roaster. I put the kettle lid on tight, fill the roaster nearly full of hot water, put on the roaster cover, and keep the water boiling hard for 4 or 5 hours. When I am using the top of my stove, as on wash day, I put the roaster in the oven. Always keep plenty of water in the roaster.

When the mush is cooked I stir it thoroly before pouring it into a pan to cool and mold into shape for slicing for frying.

(Editor's Note.—It is so much less work, so much less bother and takes so much less fuel to cook mush in a fireless cooker that we wonder why more farm women do not use the fireless. At our house we have not cooked mush on top of the stove nor in the oven since we have had our fireless cooker, which has been eleven years. We think the mush is so much better cooked this way, because it is so thoroly cooked, and it is so little trouble to cook this way. We measure out the amount of meal required, salt it, stir in (for mush to be cooled and sliced) two and a half times as much cold water as we used of the meal. We use cold water because that does away with any trouble of the meal lumping when being incorporated with the water, as is the case sometimes with hot water if one is not careful. Then we set the kettle of meal and water over the fire and let it boil for about five minutes, stirring to prevent lumping. Then we set this kettle in a boiling water bath in another kettle having a tight cover (one of our regular fireless cooker utensils), and set it on a hot heating stone in the bottom of the fireless cooker nest, and clamp down the cover, and let it cook over night. It does not take us over 15 minutes from the time that we start until the meal mixture is in the cooker. We heat it directly over a blaze. It takes a little longer over a wood or coal range fire where the blaze is farther away from the utensil than on the ordinary oil stove. Better tell husband that you want for a Christmas present this year money to buy yourself a good fireless cooker.

Boston Brown Bread

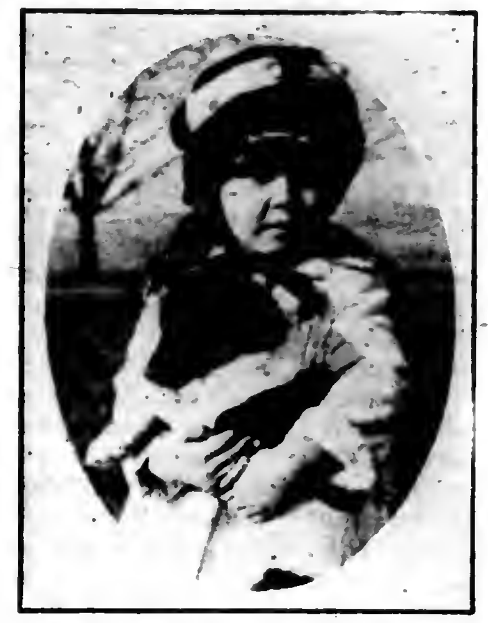
This is my recipe: Two cups cornmeal, 2 cups graham flour, 2 cups white flour, 3½ cups buttermilk, 1 cup dark corn syrup, 3 level teaspoons baking powder, 2 level teaspoons salt.

Stir together the meal, flour and baking powder. Put the soda and salt in the buttermilk, and stir until it foams. Add the syrup, and mix well. Pour this mixture into the flour mixture, and stir until smooth. With this mixture fill one-pound coffee cans half full. Set them in a roaster or other large vessel having a tight cover. (Here again is where the fireless cooker would be a distinct advantage.—Editor.) Fill the vessel more than half full of hot water, and boil in the oven three hours. Have the lids on the cans and the roaster tight. Thick sour milk can be used instead of the buttermilk. I use the by-product returned when the wheat is ground by the old process instead of graham flour sometimes and like it very much. This bread makes an excellent cereal with cream and sugar.—Mrs. O. D. B. Cronk.

LITTLE GIRL'S BONNET

My little girl needed a new bonnet for this winter. The one I saw in town that I liked best was $6.50, more than I could pay. It was made of black velvet, trimmed with light blue. I like pink best for my wee girlie. I thought it over when I got home. Suddenly I remembered that possibly I could make one similar to the store hat out of little brother's black velvet hat with an upturned brim. He had outgrown it, and it was in pretty good condition yet.

I got it out, and found that by turning the brim down, I could get almost the exact shape of the store bonnet. So then I took a piece of velvet ribbon about an inch wide, and put four pieces of this equal distance around the crown. Around the crown under these pieces I ran a wide piece of pink satin ribbon, and fastened the ends together under one of the velvet strips. Then I folded another piece of the ribbon lengthwise and pleated it, and fastened it under the brim.



Mother Made This Bonnet for Her

Black silk ribbon was used for the ties. When finished, it was so satisfactory that I would not have traded it for the $6.50 one I saw in town. —Mrs. Cora Hamilton, Broome Co., New York.

OLD FURNITURE MADE NEW

The long winter days are the best time for making over old furniture around the house. The modern painted furniture that looks so attractive in the stores owes its appearance to paint. A little grey or white enamel will soon convert an old, dingy piece into a new and stylish adornment. Chairs, tables, or other pieces of which the grain of the wood stands out can be touched up and preserved with varnish stain, giving any desired effect. Almost every attic contains some article of furniture which has been discarded because of its appearance or some easily repaired break. At the present cost of things, it is the best of economy to repair and repaint and remember by "saving the surface" you save all.

A good habit to cultivate is that of having a pan in the warming oven in which odd scraps of bread may be put and dried for future use as breadcrumbs.

The high price of cooking fats gets a slight jolt if all pieces of fats from meat are saved and clarified for use.

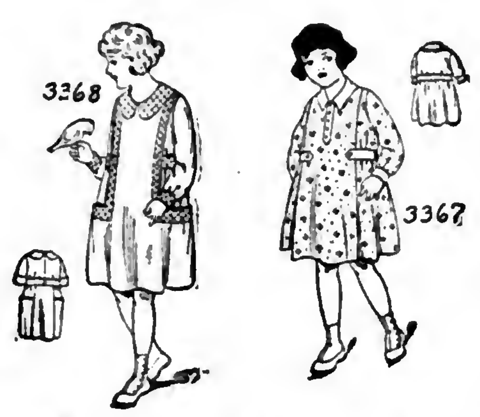
The average small woodlot should be a source of home supplies rather than a source of saleable material. There is always a need for fence posts, fuel wood and some lumber.

PENNSYLVANIA FARMER PATTERNS

Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

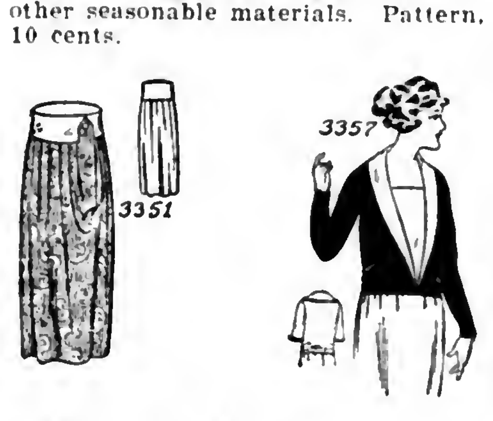
3368.—Becoming Dress for Growing Girl.—The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. A 10-year size will require 4¼ yards of 36-inch material.

Gingham, seersucker, lawn, linen, serge, gabardine, velveteen, and Jersey cloth are good for this style. Pattern, 10 cents.

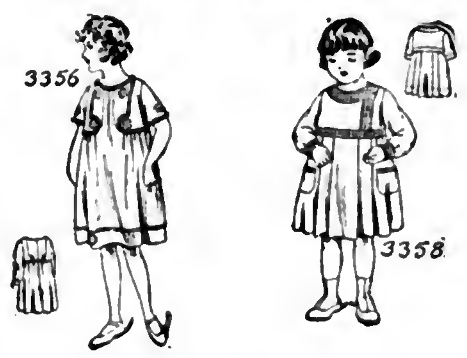


3367.—A Simple Frock for a Little Girl.—Pattern is cut in 4 sizes: 4, 6, 8 and 10 years. A 6-year size will require 2¾ yards of 27-inch material. Pattern, 10 cents.

3351.—A Pretty Skirt.—The pattern is cut in 6 sizes: 24, 26, 28, 30 and 34 inches waist measure. A 24-inch size requires 2⅝ yards of 54-inch material. The width of the skirt at lower edge is about 1⅞ yard. As here pictured figured silk crepe was used. One could make this design of satin, serge, faille, gabardine, or other seasonable materials. Pattern, 10 cents.

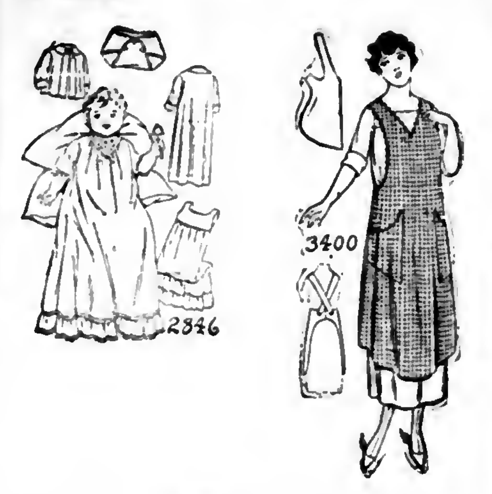


3357.—An Attractive Blouse.—Pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inchs bust measure. A 38-inch size will require 2⅝ yards of 36-inch material. Silk, velveteen, tricolette, serge, duvetyn, crepe, foularda nd satin are attractive for this style. Pattern, 10 cents.



3356.—A Dainty Dress for Little Miss.—The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. A 6-year size will require 2⅝ yards of 36-inch material. As here shown, white wash silk was used with plaitings of organdy and motifs embroidered in silk floss. Gingham, calico, unbleached muslin, lawn, poplin, repp, batiste, taffeta and woolen materials, all are attractive for this style. Pattern, 10 cents.

3358.—A New Dress For Little Lady.—The pattern is cut in 5 sizes: 2, 3, 4, 5 and 6 years. A 4-year size will require 3¼ yards of 36-inch material. As here shown chambrey and checked gingham are combined. One could have serge and plaid woolen, percale, or linen with embroidery or facings of white, taffeta or tricolette for this popular style. Pattern, 10 cents.



2846.—A Practical Set of Garments for Infants.—This comprises a pretty dress, suitable for lawn, nainsook, or batiste, a comfortable petticoat for which cambric, long cloth or lawn may be used, also practical diaper drawers, and a dainty wrapper. The drawers may be of rubberized material, of drill, linen or domet flannel. The wrapper of flannel, cashmere, crepe or cambric. This pattern is cut in one size only. The dress will require 3½ yards with ruffle and ½ yard less without ruffle, or 2½ yards of lace edging for ruffles. Diaper drawers, ⅝ yard; kimono (long) 2⅞ yards; kimono (short), 1⅜ yards; petticoat, 2¼ yards, with ruffles, and 1¾ without or 2¼ yards of edging or lace, all of 27-inch material. Dress and petticoat may be finished without ruffles. The wrapper may be cut in sack length. Pattern, 10 cents.

3400.—A Practical Set of Infant's Clothes.—This pattern is cut in one size. It comprises a dress, a petticoat, a barrow coat or pinning blanket and a slipper. Muslin, lawn, cambric, batiste, nainsook and silk are suitable for the dress. The petticoat may be of cambric or lawn. The barrow coat of flannel or flannellette with band of cambric or muslin. The slipper of kid, satin, suede, felt or elderdown. It will require 2⅜ yards of 36-inch material for the dress, 2¼ yards of 27-inch material for the petticoat with 2 yards of embroidery for the ruffle. The slippers will require ⅜ yard of 18-inch material and the barrow coat ⅜ yard of 27-inch material for band, and 1 yard 40 inches wide for the skirt. Pattern, 10 cents.

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The Voice of the Pack

By EDISON MARSHALL

CHAPTER I.

Dan Failing stepped out of the elevator and was at once absorbed in the crowd that ever surged up and down Broad Street. Where the crowd came from, or what it was doing, or where it was going was one of the mysteries of Gitcheapolis. It appealed to a person rather as does a river: eternal, infinite, having no control over its direction or movement, but only subject to vast, underlying natural laws. In this case, the laws were neither gravity nor cohesion, but rather unnamed laws that go clear back to the struggle for existence and self-preservation. Once in the crowd, Failing surrendered up all individuality. He was just one of the ordinary drops of water, not an interesting, elaborate, physical and chemical combination to be studied on the slide of a microscope. No one glanced at him in particular. He was enough like the other drops of water not to attract attention. He wore fairly passable clothes, neither rich nor shabby. He was a tall man, but gave no impression of strength because of the exceeding spareness of his frame. As long as he remained in the crowd, he wasn't important enough to be studied. But soon he turned off, thru the park, and straightaway found himself alone.

The noise and bustle of the crowd—never loud or startling, but so continuous that the senses are scarcely more aware of them than of the beating of one's own heart—suddenly and utterly died almost at the border of the park. It was as if an ax had chopped them off, and left the silence of the wild place. The gravel path that slanted thru the green lawns did not lead anywhere in particular. It made a big loop and came out almost where it went in. Perhaps that is the reason that the busy crowds did not launch forth upon it. Crowds, like electricity, take the shortest course. Moreover, the hour was still some distance from noon, and the afternoon pleasure seekers had not yet come. But the morning had advanced far enough so that all the old castaways that had slept in the park had departed. Dan had the path all to himself.

Altho he had plenty of other things to think about, the phenomena of the sudden silence came home to him very straight indeed. The noise from the street seemed wholly unable to penetrate the thick branches of the trees. He could even hear the leaves whisking and flicking together, and when a man can discern this, he can hear the cushions of a mountain lion on a trail at night. Of course Dan Failing had never heard a mountain lion. Except on the railroad tracks between, he had never really been away from cities in his life.

At once his thought went back to the doctor's words. Dan had a very retentive memory as well as an extra fine imagination. The two always seem to go together. The words were still repeating themselves over and over in his ears, and the doctor's face was still before his eyes. It had been a kind face; the lips had even curled in a little smile of encouragement. But the doctor had been perfectly frank, entirely straightforward. Dan was glad that he had. At least, he was rid of the dreadful uncertainty. There had been no evasion in his verdict.

"I've made every test," he had said. "They're pretty well shot. Of course, you can go to some sanitarium, if you have got the money. If you haven't—enjoy yourself all you can for about six months."

Dan's voice had been perfectly cool and sure when he replied. He had smiled a little, too. He was still rather proud of that smile. "Six months? Isn't that rather short?"

"Maybe a whole lot shorter. I think that's the limit."

There was the situation: Dan Failing had but six months to live. Of course, the doctor said, if he had the money he could go to a sanitarium. But he had spoken entirely hopelessly. Besides, Dan didn't have the money. He pushed all thought of sanitariums out of his mind. Instead, he began to wonder whether his mother had been entirely wise in her effort to keep him from the "rough games" of the boys of his own age. He realized now that he had been an under-weight all his life—that the frailty that had thrust him to the edge of the grave had begun in his earliest boyhood. But it wasn't that he was born with physical handicaps. He had weighed a full ten pounds; and the doctor had told his father that a sturdier little chap was not to be found in any maternity bed in the whole city. But his mother was convinced that the child was delicate and must be sheltered. Never in all the history of his family, so far as Dan knew, had there been a death from the malady that afflicted him. Yet his sentence was signed and sealed.

But he harbored no resentment against his mother. It was all in the game. She had done what she thought was best. And he began to wonder in what way he could get the greatest pleasure from his last six months of life.

"Good Lord!" he breathed. "I may not even be here to see the snows come!" Perhaps there was a grim note in his voice. There was certainly no tragedy, no offensive sentimentality. He was looking the matter in the face. But it was true that Dan had always been partial to the winter season. When the snow lay all over the farmlands, and bowed down the limbs of the trees, it had always wakened a curious flood of feelings in the wasted man. It seemed to him that he could remember other winters, wherein the snow lay for endless miles over an endless wilderness, and here and there were strange, many-toed track that could be followed in the icy dawn. He didn't ever know just what made the tracks, except that they were creatures of fang and talon that no law had ever tamed. But of course it was just a fancy. He wasn't in the least misled about it. He knew that he had never, in his lifetime, seen the wilderness. Of course his grandfather had been a frontiersman of the first order, and all his ancestors before him—a rangy, hardy breed whose wings would crumple in civilization—but he himself had always lived in cities. Yet the falling snows, soft and gentle but with a kind of remorselessness he could sense but could not understand, had always stirred him. He'd often imagined that he would like to see the forests in winter. He knew something about forests. He had gone one year to college and had studied all the forestry that the university heads would let him take. Later he had read endless books on the same subject. But the knowledge had never done him any good. Except for a few boyish dreams, he never imagined that it would.

In him you could see a reflection of the boy that played beside the pond of snow water, twenty years before. His dark eyes were still rather large and perhaps the wasted flesh around them made them seem larger than they were. But it was a little hard to see them, as he wore large glasses. His mother had been sure, years before, that he needed glasses; and she had easily found an oculist that agreed with her.

Now that he was alone on the path, the utter absence of color in his cheeks was startling. That meant the absence of red—that warm glow of the blood, eager and alive in his veins. There was indeed, another color, visible only because of the stark witeness of his skin. He was newly shaven, and his lips and chin looked somewhat blue from the heavy growth of hair under the skin. Perhaps an observer would have noticed lean hands, with big-knuckled fingers, a rather firm mouth, and closely cropped dark hair. He was twenty-nine years of age, but he looked somewhat older. He knew now that he was never going to be any older. A doctor as sure of himself as the one he had just consulted couldn't possibly be mistaken.

It was rather refreshing to get into the park. Dan could think ever so much more clearly. Someway, the hurrying people always seemed to bewilder him. Here the leaves were flicking and rustling over his head, and the shadows made a curious patchwork on the green lawns. He became quite calm and reflective. And then he sat down on a park limb of a great tree. He would sit here, he thought, until he finally decided what he would do with his remaining six months.

He hadn't been able to go to war. The recruiting officer had been very kind but most determined. The boys had brought him great tales of France. It might be nice to go to France and live in some country inn until he died. But he didn't have long to think upon this vein. For at that instant the squirrel came down to see if he had a nut.

It was the squirrel of Destiny. But Dan didn't know it then.

Bushy-tail was not particularly afraid of the human beings that passed up and down the park, because he had learned by experience that they usually attempted no harm to him. But, nevertheless, he had his instincts. He didn't entirely trust them. Occasionally a child would come with a bag of nuts, and he would sit on the grass not a dozen feet away to gather such as were thrown to him. But all the time he kept one sharp eye open for any sudden or dangerous motions. And every instinct warned him against coming nearer than a dozen feet. After several generations, probably the squirrels of this park would climb all over its visitors and sniff in their ears and investigate the back of their necks. But this wasn't the way of Bushy-tail. He had come too recently from the wild places. And he wondered, most intensely, whether this tall, forked creature had a full pocket of nuts. He swung down on the grass to see.

"Dan's eyes suddenly sparkled with delight. And he forgot all about the doctor's words and his own prospects in his bitter regrets that he had not brought a pocketful of nuts. Unfortunately, he had never acquired the peanut habit. His mother had always thought it vulgar.

And then Dan did a curious thing. Even later, he didn't know why he did it, or what gave him the idea that he could decoy the squirrel up to him by doing it. That was his only purpose—just to see how close the squirrel would come to him. He thought he would like to look into the bright eyes at close range. All he did was suddenly to freeze into one position—in an instant rendered as motionless as the rather questionable-looking stone stork that was perched on the fountain.

The squirrel was very close to him, and Dan seemed to know by instinct that the movement of a single muscle would give him away. So he sat as if he were posing before a photographer's camera.

After ten seconds had elapsed, the squirrel stood on his haunches to see better. First he looked a long time with his left eye. Then he turned his head and looked very carefully with his right. Then he backed off a short distance and tried to get a focus with both. Then he came some half-dozen steps nearer.

All the time, Dan was sitting in perfectly plain sight. It wasn't as if he were hiding. But the squirrel had learned to judge all life by its motion alone, and he was completely at a loss to interpret or understand a motioness figure.

Bushy-tail drew off a little further, fully convinced at last that his hopes of a nut from a child's hand were blasted. But he turned to look once more. The figure still sat utterly inert. And all at once he forgot his devouring hunger in the face of an overwhelming curiosity.

He came somewhat nearer and looked a long time. Then he made a half-circle about the bench, turning his head as he moved. He was more puzzled than ever, but he was no longer afraid. His curiosity had become so intense that no room for fear was left. And then he sprang upon the park bench.

Dan moved then. The movement consisted of a sudden heightening of the light in his eyes. But the squirrel didn't see it. It takes a muscular response to be visible to the eyes of the wild things.

The squirrel crept slowly along the bench, stopping to sniff, stopping to stare with one eye and another, just devoured from head to tail with curiosity. And then he leaped on Dan's knee.

He was quite convinced, by now, that this warm perch on which he stood was the most singluar and interesting object of his young life. It was true that he was faintly worried by the smell that reached his nostrils. But all it really did was further to incite his curiosity. He followed the leg up to the hip and then perched on the elbow. And an instant more he was poking a cold nose into Dan's neck.

But if the squirrel was excited by all these developments, its amazement was nothing compared to Dan's. It had been the most astounding incident in the man's life. He sat still, tingling with delight. And in a single flash of inspiration he knew he had come among his own people at last.

His own grandfather had been a hunter and trapper and frontiersman in a certain vast but little known Oregon forest. His son had moved to the eastern cities, but in Dan's garret there used to be old mementoes and curios from these savage days—a few claws and teeth, and a fragment of an old diary. The call had come to him at last. Tenderfoot though he was, Dan would go back to those forests, to spend his last six months of life among the wild creatures that made them their home.

CHAPTER II

The dinner hour found Dan Failing in the public library of Gitcheapolis, asking the girl who sat behind the desk if he might look at maps of Oregon. He got out the whole question without coughing once, but in spite of it she felt that he ought to be asking for California or Arizona maps, rather than Oregon. People did not usually go to Oregon to rid themselves of his malady.

He remembered that his grandfather had lived in Southern Oregon. He looked along the bottom of his map and discovered a whole empire, ranging from gigantic sage plains to the east to dense forests along the Pacific Ocean. Those sage flats, by the way, contain not only sage hens as thick as poultry in a henyard, and jack rabbits of a particularly long-legged and hardy breed, but also America's one species of antelope. Had Dan known that this was true, had he only been aware that these antelope are without exception the fastest-running creatures upon the face of the earth, he might have been tempted to go there instead of to the land of his fathers. But all he saw on the map was a large brown space marked at exceedingly long intervals with the name of a fort or town. He began to search for Linkville.

Time was when Linkville was one of the principal towns of Oregon. Dan remembered the place because some of the time-yellowed letters his grandfather had sent him had been mailed at a town that bore this name. But he couldn't find Linkville on the map. Later he was to know the reason—that the town, half-way between the sage plains and the mountains, had prospered and changed its name. He remembered that it was located on one of those great fresh-water lakes of Southern Oregon; so, giving up that search, he began to look for lakes. He found them in plenty—vast, unmeasured lakes that seemed to be distributed without reason or sense over the whole southern end of the state. Near the Klamath Lakes, seemingly the most imposing of all the fresh-water lakes that the map revealed, he found a city named Klamath Falls. He put the name down in his notebook.

The map showed a particularly high, far-spreading range of mountains due west of the city. Of course they were the Cascades; the map said so very plainly. Then Dan knew he was getting home. His grandfather had lived and trapped and died in these same wooded hills. Finally he located and recorded the name of the largest city on the main railroad line that was adjacent to the Cascades.

The preparation for his departure took many days. He read many books on flora and fauna. He bought sporting equipment. Knowing the usual ratio between the respective pleasures of anticipation and realization, he did not hurry himself at all. And one midnight he boarded a west-bound train.

There were none that he cared about bidding good-bye. The sudden realization of the fact brought a moment's wonder. He had not realized that he had led such a lonely existence. There were men who were fitted for living in cities, but perhaps he was not one of them. He saw the station lights grow dim as the train pulled out. Soon he could discern just a spark, here and there, from the city's outlying homes. And not long after this, the silence and darkness of the farm lands closed down upon the train.

He sat for a long time in the vestibule of the sleeping-car, thinking in anticipation of this final adventure of his life. It is true that he had not experienced many adventures. He had lived most of them in imagination alone; or else, with tired eyes, he had read of the exploits of other men. He was rather tremulous and exultant as he sank down into his berth.

He saw to it that at least a measure of preparation was made for his coming. That night a long wire went out to the Chamber of Commerce of one of the larger Southern Oregon cities. In it, he told the date of his arrival and asked certain directions. He wanted to know the name of some mountain rancher where possibly he might find board and room for the remainder of the summer and fall. He wanted shooting, and he particularly cared to be near a river where trout might be found. They never came up Gitcheapolis River, or leaped for flies in the pond back of the courthouse. The further back from the paths of men, he wrote, the greater would be his pleasure. And he signed the wire with his full name: Dan Failing with a Henry in the middle, and a "III" at the end.

The Chamber of Commerce of the busy little Oregon city was not usually exceptionally interested in stray hunters that wanted a boarding place for the summer. Its business was finding country homes for orchardists in the pleasant river valleys. But it happened that the recipient of the wire was one of the older residents, a frontiersman himself, and it was one of the traditions of the old west that friendships were not soon forgotten. Dan Failing I, had been a legend in the old trapping and shooting days when this man was young. So it came about that when Dan's train stopped at Cheyenne he found a telegram waiting him:

"Any relation to Dan Failing of the Umpqua Divide?"

Dan had never heard of the Umpqua Divide, but he couldn't doubt but that the sender of the wire referred to his grandfather. He wired in the affirmative. The head of the Chamber of Commerce received the wire, read it, thrust it into his desk, and in the face of a really important piece of business proceeded to forget all about it. Thus it came about that, except for one thing, Dan Failing would have probably stepped off the train at his destination wholly unheralded and unmet. The one thing that changed his destiny was that at a meeting of a certain widely known fraternal order the next night, the Chamber of Commerce crossed trails with the Frontier in the person of another old resident who had his home in the farthest reaches of the Umpqua Divide. The latter asked the former to come up for a few day's shooting—the deer being fatter and more numerous than any previous season since the days of the grizzlies. For it is true that one of the most magnificent breed of bears that ever walked the face of the earth once left their footprints, as of flour-sacks in the mud, from one end of the region to another.

"Too busy, I'm afraid!" the Chamber of Commerce had replied. "But Lennox—that reminds me. Do you remember old Dan Failing?"

Lennox probed back into the years for a single instant, straightened out all the kinks of his memory in less time than the wind straightens out the folds of a flag, and turned a most interested face. "Remember him!" he exclaimed. "I should say I do." The middle-aged man half-closed his piercing, gray eyes.

"Listen, Steele," he said. "I saw Dan Failing make a bet once. I was just a kid, but I wake up in my sleep to marvel at it. We had a full long glimpse of a black-tail bounding up a long slope. It was a spike-buck, and Dan Failing said he could take the left-hind spike off with one shot from his old Sharpe's. Three of us bet him—the whole thing in less than two seconds. With the next shot, he'd get the deer. He won the bet, and now if I ever forget Dan Failing, I want to die."

"You're just the man I'm looking for, then. You're not going out till the day after tomorrow?"

"No."

"On the limited, hitting here tomorrow morning, there's a grandson of Dan Failing. His name is Dan Failing, too, and he wants to go up to your place to hunt. Stay all summer and pay board."

Lennox's eyes said that he couldn't believe it was true. After a while his tongue spoke, too. "Good Lord," he said. "I use to foller Dan around—like old Shag, before he died, followed Snowbird. Of course he can come. But he can't pay board."

It was rather characteristic of the mountain men that the grandson of Dan Failing couldn't possibly pay board. But Steele knew the ways of cities and of men, and he only smiled. "He won't come, then," he explained. "Anyway, have that out with him at the end of his stay. He wants fishing, and you've got that in the North fork. He wants shooting, and if there is a place in the United States with more wild animals around the back door than at your house, I don't know where it is. Moreover, you're a thousand miles back—"

"Only one hundred, if you must know. But Steele—do you suppose he's the man his grandfather was before him—that all the Failings have been since the first days of the Oregon trail? If he is—well, my hat's off to him before he steps off the train."

The mountaineer's bronzed face was earnest and intent in the bright lights of the club. Steele thought he had known this breed. Now he began to have doubts of his own knowledge. "He won't be; don't count on it," he said humbly. "The Failings have done much for this region, and I'm glad enough to do a little to pay it back, but don't count much on this eastern boy. He's lived in cities; besides, he's a sick man. He said so in his wire. You ought to know it before you take him in."

The bronzed face changed; possibly a shadow of disappointment came into his eyes. "A lunger, eh?" Lennox repeated. "Yes—it's true that if he'd been like the other Failings, he'd never have been that. Why, Steele, you couldn't have given that old man a cough if you'd tied him in the Rogue River overnight. Of course you couldn't count on the line keeping up forever. But I'll take him, for the memory of his grandfather."

"Your'e not afraid to?"

"Afraid, no! He can't infect those two strapping children of mine. Snowbird weighs one hundred and twenty pounds and is as hard as steel. Never knew a sick day in her life. And you know Bill, of course."

And even as the men talked, the train that bore Dan Failing to the home of his ancestors was entering for the first time the dark forests of pine and fir that make the eternal background of the northwest. The wind came cool and infinitely fresh into the windows of the sleeping car, and it brought, as camels bring myrrh from the east, strange, pungent odors of balsam and mountain flower and warm earth, cooling after a day of blasting sun. And these smells all came straight home to Dan.

(Continued Next Week.)

LOOK WHAT I FOUND FELLOWS, A POOR HOMELESS CAT, LET'S ADOPT IT, IT'LL CHEER US UP!
!
NOTHIN' LIKE A CAT ON YOUR HEARTH STONE TO MAKE A PLACE LOOK HOME LIKE!
YOU BET! BUT WHERE'S THE HEARTH STONE
SHE DON'T LIKE US AL SHE'S GOING TO LEAVE!
YEP! SHE'S GOING TO DITCH US!
!
?
GOSH! SHE'S MOVIN' IN ALL RIGHT AL
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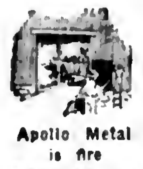

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Review of the Feed Market

Prices Favorable for Buyers But Discouraging to the Producers

By SANDERS SOSLAND

WITH ideal late fall and early winter weather, permitting a sharp reduction in the feed bills of dairymen and feeders generally, trade in feedstuffs continues to reflect extreme weakness. What some observers considered as ridiculously low prices hardly two months ago are high in comparison with the levels prevailing on current markets. From the viewpoint of the demand situation, the outlook is not particularly encouraging for a rebound in feedstuffs values or even a halt in the downward trend. But the prices for most feeds already have declined sensationally from the season's high point; they are far below the cost of production on the whole, and lower in many instances, relatively, than the value received in feeding operations.

There is an old law on markets that prices do not move in one direction indefinitely and that there are two sides to the trade, tho one side may be invisible to some operators. So, while surface conditions may justify a bearish attitude as to the position of prices, underlying factors may be highly favorable for a turn. A rebound already has been witnessed in the market for corn and oats, coming at a time, it is rather significant to note, when students of the trade were talking freely of 25 cents a bushel on farms for the leading coarse grain. To what extent the rally will be sustained in the grains and whether the turn in prices will be broad enough to strengthen cottonseed cake and meal, linseed feed, bran and shorts, commercially prepared balanced rations, hay and other commodities is doubtful. There is a possibility, of course, that the turn in corn and oats may prove a boon to feedstuffs generally. However, there is no basis for extremely bullish view on feeds. The basic factors, involving the enormous surplus of various crops, the strained financial situation which continues to seriously restrict buying, and the readjustment in live stock and commodity values generally, are against a sharp upturn in feed prices.

The reason or at least the most important influence in the partial change of sentiment regarding the position of corn is the refusal of producers to part with their surplus corn at the recent low levels. The country prices held around 30 to 40 cents a bushel at most stations, net to farmers, during most of the past month and will not average 50 cents a bushel at the advanced level. Farmers have been slow to sell on this basis, the $2 price of a few months ago apparently having become too strongly imbedded in their minds. Even tho hogs have been radically depressed, the pork animals are relatively higher than the grain, and feeders therefore are more or less disinclined to ship corn to market. Still there are fewer hogs on farms, as well as fewer cattle, and, with the record crop on hand, it does not seem a wise policy to continue to withhold the grain from commercial channels. Corn at 50 cents a bushel, while certainly not a high price, may be considered an attractive basis for selling. And there is growing evidence that farmers recognize the situation in corn, and, rather than allow their surplus to deteriorate in quality and as a means of meeting maturing loans, they will sell more freely. For the present, the stocks of corn at terminal markets, being considerably greater than at this time a year ago, are sufficient for requirements of the consuming trade.

No important demand prevails for corn. The fact that the crop this year is more evenly distributed than in many seasons, along with the abundance of various rough feeds and moderate temperatures, have tended to check buying. Carlot offerings of corn in Chicago are bringing around 73 to 80 cents a bushel, and grain for shipment as far ahead as next May can be had on future markets around 75 cents a bushel. Oats are selling largely around 50 cents a bushel, still lower than a month ago tho as much as 10 cents above the minor cereal is following the trend of corn price closely, but it is doubtful whether it will sell materially above 50 cents a bushel for any lengthy period.

Bran and shorts are moving in a course which indicates the wheat mill offals are scratching bottom, tho the relationship in price between millfeeds and other commodities, particularly cottonseed cake and meal, does not warrant belief that the bottom of values has yet been approached. Both bran and shorts are selling too high compared with other competitive feeds, the consuming trade, particularly in the East, buying on a smaller scale on this account. For instance, bran has commanded a higher price in many Pennsylvania and surrounding eastern markets than cottonseed cake and meal, the latter products, however, having a protein content practically three times as great. Bran is selling around $24 to $25 a ton, sacked in carlots, basis Minneapolis, and around $25 to $26 in Kansas City, with the delivered price in Philadelphia and surrounding eastern markets around $36 to $37.50 a ton. Bran for January shipment can be had at a discount of about $2 a ton under the spot market, reflecting a bearish attitude on the part of the trade operators. For shorts, prices are at the smallest discount in many months, or virtually since the fixed maximum prices were established by the United States Food Administration in 1918. Kansas City quotes shorts or middlings at the narrowest premium over bran, the gray middlings being offered around $29 a ton and brown at $25 to $26, the latter being easier than bran. Minneapolis is offering brown or standard middlings at $23 a ton, without any demand, and the gray or flour middlings on the Northwest market are bringing $31 to $33 a ton. Gray shorts in St. Louis and Chicago are holding around $32 to $34 a ton, with the Eastern prices around $40.

Light production by mills over the entire country and probability that the output will continue small, owing to stagnant buying of flour, is a bullish influence in the bran and shorts trade. However, so long as weather conditions remain moderate and other feeds are at a discount, bran and shorts can hardly be expected to advance in price. Some students of the trade are talking $20 a ton for bran in the West before the bottom is reached and a low point of $25 a ton for shorts.

When in a fix, sweating will get you farther than swearing. Let mules do the kicking.

The "U. S." Walrus

Warm as an Arctic—washes off like a Boot

The "U. S." Walrus—worn by farmers everywhere

FOR years farmers have needed a high rubber overshoe—easy to put on and take off—warm and comfortable—one that could be easily cleaned of the dirt of the barnyard.

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At exactly the places where overshoes usually wear out first, the U. S. Walrus has been made *strongest*. Its sole consists of heavy layers of the finest rubber. All other points of strain are specially reinforced. Ask your dealer to show you a pair!

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The U. S. line of footwear has a type for every need—arctics, rubbers, "overs." Every one is backed by over half a century of experience. The rubber comes from our own plantations—the whole process of manufacture is supervised by experts.

Always look for the U. S. Seal—it means solid wear and long service for your money.

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No storing costly fodder for months of snow and ice. Here you can profitably raise alfalfa, grain, fruit, stock and poultry. You have benefits of established communities. Schools are ready, and fine roads. The various fruit associations have a remarkable marketing system. You raise the fruit; no bother about markets. That problem has been worked out for you.

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Our illustrated folders, descriptive of California lands, and the trip there mailed on request. Let me help you plan your trip, and advise about places worth looking over.

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is 100% efficient in cleaning up the scale and it is a most excellent winter fungicide. It spreads well; is adhesive and does not wash off with winter rains; is in powder form, concentrated; easy to handle; dissolves quickly in cold water. Note the saving in advanced freight rates—a 100 pound keg of B T S is the equivalent in all spraying operations of a 600 pound barrel of lime sulphur solution.

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THE NATIONAL GRANGE

The closing days of the annual session of the National Grange, at Boston, Mass., were devoted to committee reports and business connected with the work of the order. A complete revision was brought about of the relationship between the Pomona Granges and the rest of the organization, by bringing these Granges under the jurisdiction of the National Grange, both as to the issuance of charters, and matters of discipline, instead of the State Granges.

National policy, and of national legislation acted on included many matters of great public interest, of which the following is a press summary.

Secretary of Agriculture

Asking for the appointment of a "practical farmer, a man so identified by ideas, vocation and effort that farmers will recognize him as one of themselves, and around whom farmers will rally with confidence in his leadership."

Co-operative Marketing

A long report strongly supporting all co-operative efforts, and in particular asking that definite action as to co-operative selling plans be suspended until after the Committee of 17 makes its report; that the country be divided into three districts for the interstate co-operation of Grange buying agencies; and that commodity selling organizations be endorsed as one way to solve marketing problems.

Taxation

A carefully prepared report covering the history and agricultural aspects of taxation probems, with distinct recommendations adopted as the Grange program—as follows:

1—No property exempt from taxation except as specifically exempted by State Constitutions.

2—Exemption by reason of debt applied equally to real and personal property.

3—Mortgages to be taxed as real property assessed against owner of mortgage, in district where land is located, and owner of land given exemption in amount of mortgage.

4—Corporation property both real and personal to be taxed the same as privately owned property.

5—Tax on railroad property to be based on valuation equal to total market value of stocks and bonds outstanding, each tax unit to share in proportion of mileage in that unit to total mileage.

6—Equality of assessment between individuals and between tax districts.

7—No city to have separate assessment, all property everywhere to be assessed at fair cash value.

8—Bank property, whether real or personal, to be assessed and taxed, just like any other property.

9—Income and inheritance taxes endorsed as source of state and federal permanent income.

10—Excess profits, luxury, and excise taxes afford just and equitable sources for meeting unusual government expenses.

11—All taxes should be levied to encourage home owning, and to discourage speculation and tenancy, so far as public policy will permit.

12—The Grange opposes a general sales tax.

POTATO EXHIBITS TO BE FEATURE OF FARM PRODUCTS SHOW

The greatest exhibit of home grown potatoes ever shown in Pennsylvania will be one of the features of the Fifth Annual Farm Products Show to be held in Harrisburg, January 24-28. The Pennsylvania Potato Growers' Association will have general charge of the exhibit, while in connection with the show about 400 members of the organization will hold their annual meeting in Harrisburg.

Growers in all sections of the state are preparing their exhibits of tubers and the competition will be spirited. More than twice the amount of space used in displaying the potato exhibits at the show last year will be available at this year's show.

In the potato contests the State has been divided into districts according to the extent to which the potato industry is developed in the various counties. Each exhibit is to consist of a peck of potatoes and the districts and prizes offered follow:

DISTRICT NO. 1

Composed of Berks, Columbia, Lehigh, Montgomery and Schuylkill Counties.

		First	Second	Third	Fourth	Fifth
Class 1.	White skin potatoes.......	$5.00	$4.00	$3.00	$2.00	$1.00
Class 2.	Pink skin potatoes	$2.00	$1.50	$1.00		
Class 3.	Boys & Girls (any variety)	$2.50	$2.00	$1.00		

DISTRICT NO. 2

Composed of Adams, Bucks, Cambria, Carbon, Chester, Cumberland, Dauphin, Delaware, Franklin, Lebanon, Monroe & Northampton Counties.

		First	Second	Third	Fourth	Fifth
Class 1.	White skin potatoes.........	$5.00	$4.00	$3.00	$2.00	$1.00
Class 2.	Pink skin potatoes	$2.00	$1.50	$1.00		
Class 3.	Boys & Girls (any variety)	$2.50	$2.00	$1.00		

DISTRICT NO. 3

Composed of all counties not included in Districts 1 and 2

		First	Second	Third	Fourth	Fifth
Class 1.	White skin potatoes.......	$5.00	$4.00	$3.00	$2.00	$1.00
Class 2.	Pink skin potatoes	$2.00	$1.50	$1.00		
Class 3.	Boys & Girls (any variety)	$2.50	$2.00	$1.00		

Sweepstakes Class

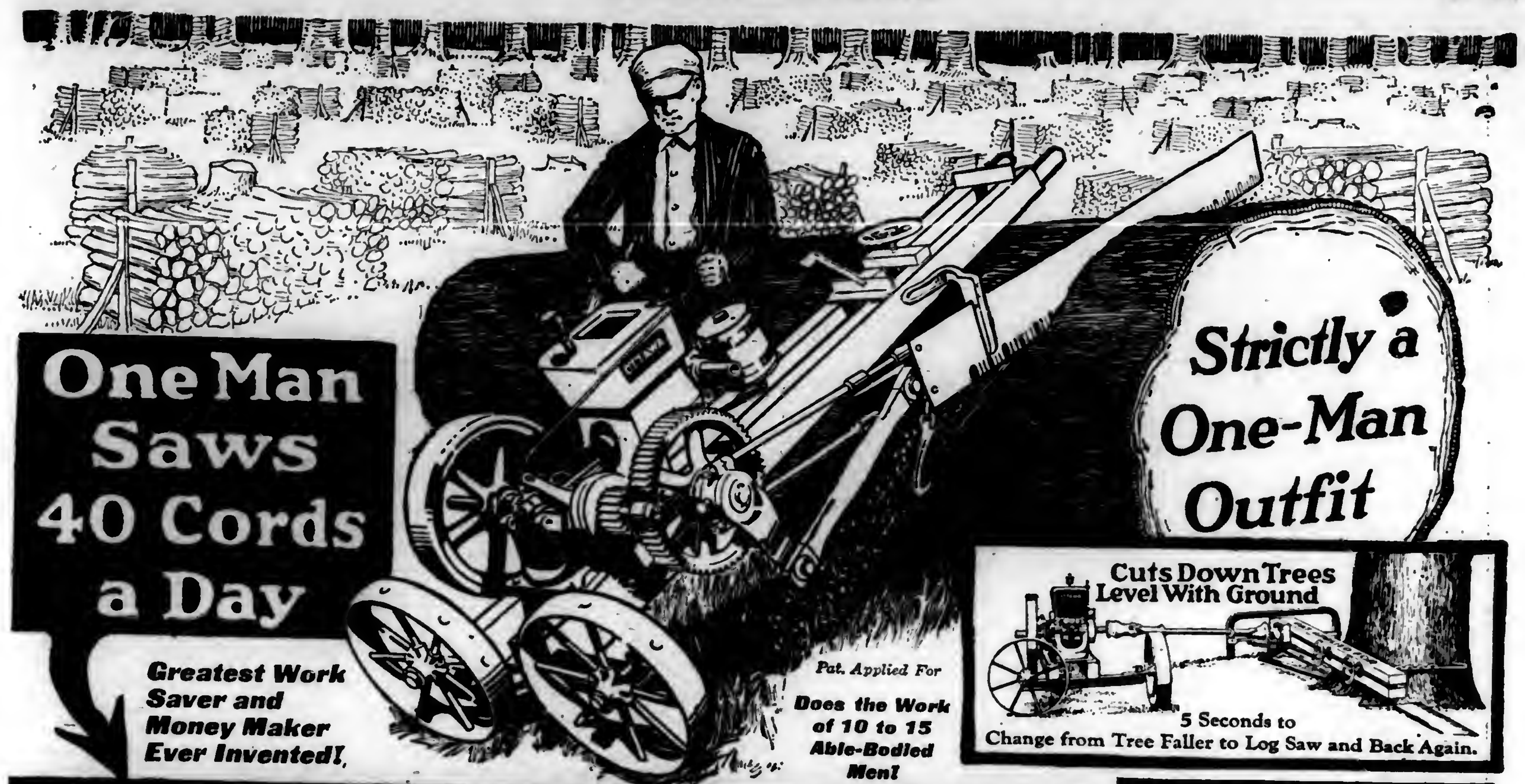
		First	Second	Third	Fourth	Fifth
Class 1.	White skin potatoes	$5.00	$4.00	$3.00	$2.00	$1.00
Class 2.	Pink skin potatoes	$2.00	$1.50	$1.00		

The winning exhibits of potatoes in each of the three districts (including boys' and girls' classes) will [illegible] in this class.

Grand Champion Exhibit—$5.00.

For best exhibit in the sweepstakes class regardless of color.

The Pennsylvania Potato Growers' Association offers a silver cup to the county winning the best display of ten exhibits. These must be arranged together and labeled for the convenience of the judge. The cup is to be competed for annually until won three times by any county, when it becomes the permanent property of that county.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Does the Work of 10 to 15 Able-Bodied Men!
Cuts Down Trees Level With Ground
5 Seconds to Change from Tree Faller to Log Saw and Back Again.

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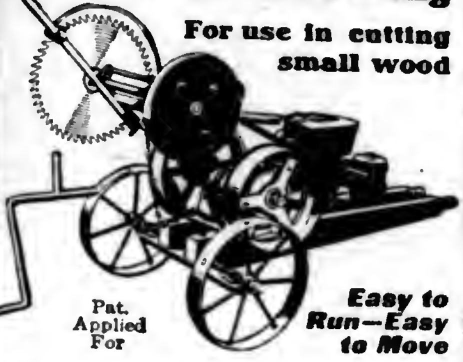
Send at once for Special Offer and Lowest Factory Price on the Improved 1921 Model OTTAWA Log Saw. Less than Wholesale. We make this Special Offer to enable as many as possible to provide fuel for themselves and to sell. Costs you nothing to investigate. Write at once! Don't delay! Just send your name and address on coupon below and get full particulars. Learn all about this remarkable Special Offer and how easy it is to own this wonderful outfit. Don't put it off a single day. The OTTAWA saves lots of hard work and money for you. Send today. As a special inducement we are offering at no extra cost the OTTAWA "power force feed" (Pat. pending) which is the secret of successful Log Saw operation.

Friction Clutch lever controlled, roller bearing, enables you to start and stop saw blade without stopping engine. Saves time and provides absolute safety in moving saw from log to log and from cut to cut along the log! No dangerous swishing of the saw blade in the air! Second clutch provided as a safety clutch to prevent accident if saw blade should bind.

Junior Buzz Saw Rig

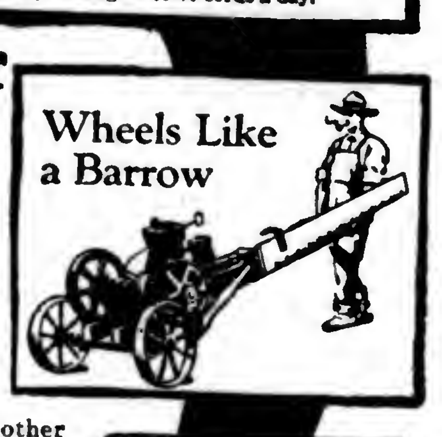
For use in cutting small wood


Pat. Applied For
Easy to Run—Easy to Move

The OTTAWA Junior Buzz Saw Rig is especially designed for cutting up smaller wood. It is easy to operate, and easy to move, being light and wheel mounted. It saws lightning fast, cutting 60 to 70 cords a day.

OTTAWA LOG SAW

Cuts Down Trees—Saws Logs by Power



Read These Letters!

Cut 150 Cords in 5 Days in Rain
The Ottawa Engine Log Saw I purchased from you last spring is a great success and a necessity to a timber man. I used it about 5 days and cut 150 cords of wood and on awful rough and muddy ground, during that awful rainy weather last spring, and also I had a lot of bad small timber to work up.—Oscar Bulla, Otwell, Ark.

Ottawa Is a Wonderful Machine
The Ottawa is a wonderful machine. Mine works fine. It is a labor saver, and I would not take anything for it, if I could not get another. I can give affidavit that the Ottawa will do all you recommend it to do. I can't praise the Ottawa too highly, for it is simply a little giant in the timber. It does not get tired of its work. Rain or shine, it keeps at work.—G. Riechert & Bro. Monticello, Florida, Route 2.

Greatest Labor-Saving Machine
The Ottawa is one of the greatest labor-saving machines on the market. Anyone can operate it satisfactorily. Sawing down trees is a pleasure and to saw a log into varied lengths, it cannot be beat. I strongly recommend it to anyone having trees to fell or logs to saw. —C. Christenson, Osage City, Ks.

Saws—in a Creek—on a Hillside.
I consider the Ottawa Log Saw one of the greatest labor savers on my farm. Have had it in all kinds of places—in a creek, on a hillside—it is almost impossible to find any position in which it won't saw.—Stanley Watkins, Morrow, O., R. 2.

Pulls Over 4 H-P. The New Improved 1921 Model cuts much faster than other mounted Drag or Log Saws. Makes 310 Saw Cuts a Minute—Over 5 each second. Weighs 100 pounds less than any other 4-Cycle Log Saw built. Easiest to move and operate of all log saws. Counter-balanced Crank Shaft eliminates vibration; increases power and saves fuel. Direct gear drives saw; no chains to tighten; no keys; no set screws. 4-Cycle Frost Proof Engine. Built-in Magneto—no batteries ever needed. Automatic Governor with Speed Regulator. Eccentric gives saw human rocking motion, keeping cut free from saw dust. Outfit strong but simply built. Nothing to get out of fix. When not sawing, engine runs pumps, feed grinders, or anything requiring 4 H-P.

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30 Days Trial **10-Year Guarantee** This Guarantee Protects you. We guarantee the OTTAWA Log Saw to be exactly as described and illustrated in our advertising, catalog and printed matter; that it will do the work claimed for it; that it will develop full-rated 4 H-P.; that it represents full value for the price you pay. If for any reason the OTTAWA Log Saw fails to fulfill our guarantee after trying it 30 days we expect you to return it in accordance with guarantee and trial offer.

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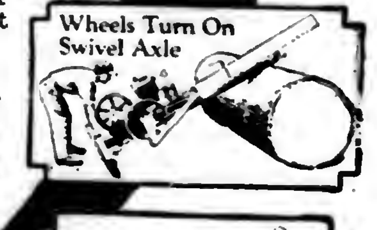
Get our payment plans of purchase and find out how easy it is to own an OTTAWA Log Saw. It will soon pay for itself. Any man with logs to cut cannot afford to be without this log saw. And you can soon own an OTTAWA under our wonderful selling plan at Less Than Wholesale Cost. For nearly twenty years we have been selling direct to users.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You can only get the OTTAWA Log Saw direct from factory, and at the low factory price. You can't get an OTTAWA in any other way. The OTTAWA is the standard by which all Log Saws are judged. It's the original. Beware of imitations.

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Markets

PHILADELPHIA PRODUCE

—Dec. 11, 1920.

Conditions in the fruits and vegetable markets are about same as last week, nearly all kinds seeking a downward tendency and getting nearer pre-war prices, there being but very few exceptions, as the following quotations show:

Vegetables—Anise, $4.50@4.75 bbl.; Artichokes, $12@$15 drum; beans are scarce and are selling at $3@5 hpr.; beets, $3@4 100 bchs. and 40@60c ⅝-bskt.; Brussels sprouts, 10@15c qt.; cabbage, $7@15 ton; carrots, $1.25@1.50 cwt. in the rough and $2.25@3.25 bbl. for the nearby grown; cauliflower, $1.25@1.75 crate; celery, $1.50@3.25 crate for N. Y. state, $4.25@4.50 crate for California, and 6@20c bch. for nearby grown; cucumbers are selling at $3.50@7 bu. box. Eggplants are scarce and sell $3@5.50 box. Endive, $4.50@5 bbl.; Escarole, $4.50 bbl.; kale from Norfolk, $1.25@1.50 bbl.; lettuce, southern, $1.50@3; onions, $1@1.35 cwt.; mushrooms, $1@1.65 3-lb. bskt; parsnips, 50@70c Z-bskt. Parsley nearby, 3@4c bch., and $6@7 box for western. Peas are scarce, and going down in price. Californias selling at $8@8.50 box and the Florida grown at $4@4.50 hmpr. Peppers, $4@5 crt for southern, and 75c@$1.25 for nearbys. Radishes, 3½@4½c bch. for hot house grown; Romaine, $1.75@2 hmpr. Tomatoes, scarce, one car of southern here this morning selling at $6@7.50 crate for fancy and $3@5 crate for choice. Hot house tomatoes continue steady at 30@40c lb. on best with No. 2s at 15@25c, and culls still lower. Potatoes, Penna. grown, sell at $1.40@1.65 cwt.; choice stock, $1.75@2 cwt. for fancy. Nearby N. J.'s are selling at 50@75c ⅝ bskt. and Eastern Shores at $2@2.75 bbl. Turnips; 30@50c ⅝-bskt. for whites and 60@75c ⅝-bskt. for Penna. yellow turnips, 30@50c ⅝-bskt. for Aberdeens. Norfolk spinach sold at $2@2.25 bbl., with one car very fancy at $2.50, and some poorer down to $1.75. Nearby ⅝-bskts. spinach range mostly at 65@75c. Several cars of Md. and Del. sweet potatoes here this morning which sold mostly at $1.50@1.65 hmpr. The nearby ⅝-bskts. are firm at $1@1.25 on primes with No. 2s and mediums bringing 50@75c ⅝-bskt. Southern yams are steady at $3.50@4 bbl. and $1.50@1.70 hmpr. Watercress, $2.50@3 100 bunches.

Fruits—Same conditions exist in the apple market, and prices are easier and lower than a week ago. Baldwins, $3.50@4.50; Ben Davis, $2.75@3.75; Grimes Golden, $3@5.50, a few fancy at $6; Greenings, $3@4.50; York Imperials, $2.50@4.50; Wagners, $3.50@4; Smith Cider, $2.50@3.50; Stayman Winesaps, $3@6.25; Spys, $3.50@4; Hubbardsons, $3.50@4.25; Gillflowers, $4.50@5; other varieties, $3@4. The season on pears is about over, only an occasional few coming along which are selling about as follows: Anjous, $2.25 bu.; Clarigeaus, $1.75@2 bu.; other varieties, $1@2.25 bu. Cranberries are holding firm at high prices, and barrels are selling at $10@16, and 32-qt. crates at $3@4.50. Casaba melons are slow at $1@2 crate. Florida oranges selling mostly at $2@4 box and grapefruit at about the same range in price.

Poultry—The supplies of live poultry are ample for the demand at the prices quoted and the market is ruling about steady at the following prices. Fowls, heavy, 28@30c lb.; 20@27c for medium fowl and $21@24c for small sized fowl. Spring chickens bring 26@28c for fancy, with ordinary and small sizes, $22@23c lb. Turkeys sell from 40@48c lb., as to condition, poor and thin turkeys being hard to sell. Ducks range from 21@30c, top price being for white Pekins, while the Muscovys bring the lower prices. Geese are unchanged at 25@30c lb. Dressed turkeys from nearby points are lower and sales are now being made around 53@55c lb. with some poor turkeys lower. Western turkeys sell at 51@53c for fancy and 40@45c for the ordinary to good. Dressed fowl bring 28@36c as to size and quality, with roasting chickens 31@37c and broiling chickens, 41@47c lb. Ducks are unchanged at 35@40c and geese steady at 30@32c lb.

Eggs—The first break in the egg market in several weeks occurred this morning, but they are still bringing high prices. Prevailing high prices greatly curtailed the demand, as the supplies are not showing much increase over the offerings of a week ago. Prices declined three cents a dozen this morning, and at this writing the prevailing prices are as follows: Penna. and other nby. current receipts 82c doz.; Penna. and other nby. firsts 84@86c doz., with fancy selected at 95@96c doz. Western firsts, 79@82c, with western extra firsts at 84@86c doz.

LANCASTER PRODUCE

—Dec. 11, 1920.

The markets here today were all well stocked with fruits and vegetables with many farmers in attendance. An abundance of butter, eggs and chicken were also on hand with a consequent falling off in price of these commodities. Eggs which last week brought 90 cents per dozen were sold all the way down to 85 cents a dozen while chicken that last week brought $1.75@2 could be had today for $1.35. Butter which sold as low as 65 cents a pound in a few instances last week could be had at any stand on market at that figure today and here and there it sold at 63 and 64 cents a pound. The quotations:

Butter and Eggs—Country butter 63@70c lb.; creamery butter, 75c lb.; fresh eggs, 85@90c doz.; duck eggs, 90c doz.; goose eggs, 8@10c ea.

Poultry — Chickens, $1.35@2; ducks, $2.25; broilers, 75c@$1.25; squab, 50@75c.

Vegetables—Lima beans, 50c@60c qt.; red beets, 5c bch.; cabbage, 5@10c hd.; cauliflower, 15@25c hd.; celery, 5, 10@25c stalk; carrots, 50@80c box; 15c ½-pk.; eggplants, 15@20c ea.; lettuce, 10, 15@20c hd.; onions, 10c box; green, 8@10c bch.; parsnips, 10 qt. box, 15c ½-pk.; peppers, 1, 3@5c each; potatoes, 20@25c ½-pk.; $1.15@1.25 bushel; 2ds, 90c@$1 bu.; culls, 50c bu.

sweet potatoes, 20@40c ½-pk.; parsley, 3@5c bch.; radishes, 5@8c bch.; summer squash, 5@10c ea.; pumpkins, crook necks, 6@15c ea.; spinach, 25@30c ½-pk.; tomatoes, 10@15c qt. box, green, 15@20c ½-pk.; turnips, 20c ½-pk.; rhubarb, 3@5c bch.

Miscellaneous—Cider, 40c gal.; hominy, 12@15c pt.; scrapple, 15c lb.

YORK PRODUCE

—Dec. 11, 1920.

The markets have changed but little for some time, except to settle to a lower level and there is little demand at any price. The producer of foodstuffs is greatly cheered (!) over the latest government report that all foodstuffs have dropped 29¼ per cent., the lowest for four years. Nothing is said of the probability of a drop in the price of manufactured products, as clothing, shoes, furniture, implements, etc.

Eggs—85@90c dozen.

Butter—Country, 65@70c lb.; separator, 70@75c lb.; milk, 12c qt.

Poultry—Hens, 25@28c lb.; dressed, $1@$2.25 each.

Vegetables—Potatoes, 10@18c ½-pk.; 75c@$1.25 bu.; cabbage, 3@8c hd.; lettuce, 8@15c hd.; beets, 5c box; radishes, 5c bch.; onions, 5c bch.; 15@25c ½-pk.; lima beans, 35c qt.; soup beans, 25c qt.; squash, 3@5c ea.; turnips, 18@30c ½-pk.; hams, green, 30@35c lb.; sliced, 40@85c lb.; lard, 20@24c lb.

Fruits—Apples, 10@40c ½-pk.; 50c@$1.75 bu.; pears, 15@25c ½-pk.; tomatoes, 10c box; 3@10c ea.

Retail Grain Market—Wheat, $1.80; corn, $1.50; oats, 90c; rye, $1.75; bran, $2.75 cwt.; middlings, $2.80 cwt.

Wholesale Grain Market—Wheat, $1.60; cor.n $1; oats, 55c; rye, $1.30; bran, $45 ton; middlings, $52 ton.

NEW YORK PRODUCE

—Dec. 11, 1920.

Butter firmer, receipts, 6421; creamery, higher than extras, 54@54½c; extras (92 score), 53½c; firsts, 88 to 91 score), 41@52½c.

Eggs firm; receipts 4926; fresh-gathered extra firsts, 90@92c; firsts, 87@89c; state, Penna. and nearby western hennery whites, firsts to extras, 95c@$1.05; nearby hennery browns, extras, 95@98c; do gathered and mixed colors, firsts to extras, 94@97c; refrigerator firsts to finest, 61@63c.

Cheese irregular; receipts, 737; state whole milk flats, held specials, 25¼@26½c; do average run, 24½@25c; state, whole milk flats, fresh, specials, 22½@25c; do average run, 22½@23½c.

Vegetables—Potatoes in free supply and selling very slowly, with tone weak and outside quotations extreme. Sweet potatoes in light receipt and Eastern Shore advanced to $1.25@1.65. Potatoes, state, bag, $2.75@3.25; L. I., bbl., $4@4.50; southern, bbl., $2.50@3; sweets, Jy., 1s bskt., $1.50@1.85; Jy. 2s, bskt., 75c@$1.25; beets, nearby, bbl. $2@3; nearby bag, $2@2.50; nearby, bskt. 75c@$1; cabbages, bbl. $1@1.50; 100, $1.25. Dom $13@16 ton; Dom, red bbl., $1.25; onions, state and Wisconsin red, 75c@$1.50; pumpkins, cheese, $2; parsnips, bbl. or bag, $2.50@3; parsley, nearby, 100, $1@2; nearby bskt., 50@75c; Balt., bskt., 50@75c.

Fresh Fruits—Apples, bskts. fancy, $1.25 bbl. York Imp., $3.50@4.75; S. Winesap, $4.50@5; Baldwin, $4@5; N. Spy, $3@4.50; Jonathan, $4@6; 20-ounce, $2.50@5.00; Greening, $3@5; Delicious, $2.25@4.25; pears, bbls., Keiffer, $2.50@3; Lawrence, $4@5; Seckel, $6@9; cranberries, E. blk., bbl., $9@11; grapes, state, Cat'ba, 90c; Concord, bskt., $1.25@1.50; Colmar grapes imported, lb., 50c; Avocada pears, Fla., fancy, box, $15@18.

LIVESTOCK MARKETS

—Dec. 11, 1920.

LANCASTER

Cattle—Receipts, 778 head; market dull; little demand for good butchers; slow movement stockers and feeders at steady prices; steers, good, $10.25@11.50; fair to good; $9.50@10.25; medium, $8.75@9.50; common, $7@8.75; bulls, fair to good, $8.25@9.25; medium, $6.50@8.25; common, $5.50@6.50; heifers, choice to prime, $9.25@10; good to choice, $8.50@9.25; medium, $7.50@8.50; choice, $7@8.50; medium, $5.50@7; common, $4.50@5.50; canners and cutters, $2.50@4.50; feeding steers, good to choice, $9.25@10.25; fair to good, $8@9.25; common, $5.50@8; stock steers, good to choice, $7.50@9; fair to good, $6@7.50; common to fair, $4@6; stock bulls, good to choice, $7.50@8.50; fair to good, $6@7.50, common to fair, $4@6; stock heifers, good to choice, $7@8.50; fair to good, $6@7; common, $4@6; calves, good to choice, $15@15.50; medium, $12@15; common, $4@12.

Hogs—Receipts, 602 head; medium weight, $11@12; light weight, $10.50@11.50; roughs, $9@10.50.

CHICAGO

Cattle—Receipts, 1000, compared with week ago, beef and butcher cattle closing round steady; some medium and good killing heifers showing slight gains in value; bologna bulls fully 25c higher; fat bulls dull; light and handy veal calves mostly $1.50 lower; heavies weak to lower; stockers and feeders steady.

Hogs—Receipts, 8000; mostly 15c to 25c higher than yesterday's average, top, $9.85; bulk, $9.60@9.75; pigs, 25c to 35c higher; bulk desirable 90 to 130 pound pigs, $9.35@9.60.

Sheep—Receipts, 2000, compared with week ago, fat lambs and matured wethers, 75c to $1 lower; yearlings $1 lower; fat ewes, breeding and feed stock steady.

EAST BUFFALO.

Cattle—Receipts, 475, dull.

Calves—Receipts, 100; 50c lower, $4@16.

Hogs—Receipts, 2400; 25c and 50c higher; heavy, $10.50@10.65; mixed, $10.65@10.75; yorkers, $10.75@10.85; light yorkers and pigs, $11@11.25; roughs, $8.50@9; stags, $7@8.

Sheep and Lambs—Receipts, 1600; steady; lambs, $6@13; yearlings, $6.50@9; wethers, $3@6.50; ewes, $2@5; mixed sheep, $5@5.50.

NEW YORK

Cattle—Receipts, 520; no trading.

Calves—Receipts, 360; steady; veals, $16; culls, $8@9; barnyard calves, $4@5.50; westerns, $8.50.

Sheep and Lambs—Receipts, 2475; sheep steady; lambs strong; sheep, ewes, $3.50@5.50; culls, $2.50@3; yearlings, $7@9; lambs, $10.50@13.50; culls, $7@8.50.

Hogs—Receipts, 3575; steady at $11@11.50; little pigs under 70 pounds, $10@11; roughs, $9@9.50.

PITTSBURGH

Hogs—Receipts, 3000; steady, heavies, $10@10.25; heavy yorkers and light yorkers, $10.65@10.75; pigs, $10.25@10.50.

Sheep and Lambs—Receipts, 500; steady; top sheep, $6; top lambs, $13.

Calves—Receipts, 100; steady; top, $15.50.

PHILADELPHIA LIVESTOCK

—Dec. 11, 1920.

Receipts for week ended December 11.

	Cattle.	Sheep and lambs.	Hogs.
Totals for week	2239	7826	10957
Previous week	1869	4434	8367

Calves—Receipts of calves were 1444, as against 1219 the previous week.

Beef Cattle—Steers and cows of desirable quantity ruled steady with a fair demand. Veal of fine quality was kept pretty well cleaned up at steady prices. Quotations. Steers, good to cohice, $10.50@12.50; fair to good, $9@10.50; common to fair, $8@9; cows, western, good to choice, 6½@7½c; do, fair to good, 5½@6½c; bulls, 4½@7c; calves, extra to choice, $16@16.50; fair to good, $14@15; common, $10@12; Tennessee, $12@14; other southerns, $6@10.

Sheep and Lambs—There was a fair demand for desirable stock and the market ruled steady. Supplies were moderate. Quotations: Sheared sheep, wethers, extra, $6.50@7; do, good to choice, $5.50@6; medium, $4.50@5.50; do, common, $1@3; ewes, heavy, fat, $4.50@5; lambs, spring, choice, West Virginia, $13@13.50; choice, Penna., $12.75@13; medium, $11@12.50; common, $9@10.

Hogs—Trade was quiet and prices were without important change. Offerings were moderate but ample. We quote: Best western, $13@13.25; nearby, good, $11@11.25.

City Dressed Stock—There was a fair demand for steers, heifers and cows and values ruled steady. Mutton was quiet and easier. Other kinds were generally steady, with demand fair for desirable stock. We quote: Steers, 14@22c; heifers, 12@16c; cows, 10@12c; calves, city dressed, choice, 28@30c; calves, country dressed, 26@28c; lambs, spring, cohice, 26@28c; sheep, 8@14c; hogs, 18@19c.

PHILADELPHIA HAY AND GRAIN

—Dec. 13, 1920.

Baled Hay and Straw—Receipts, 144 tons of hay and 5 cars of straw. Trade slow and prices favored buyers. We quote: Timothy hay, No. 1, none here; No. 2, $28@29; No. 3, $25@26; sample, $22@24; no grade, $18@20; clover-mixed hay, light mixed, $26@27; No. 1 mixed, $24@25; straw, No. 1 straight rye, $21@21.50; No. 2, $19.50@20; No. 1 tangled rye, $17.50@18.50; No. 2 do, $17@17.50; No. 1 wheat straw, $17@17.50; No. 2 do, $16@16.50.

Bran dull and barely steady. We quote: Car lots, including sacks, soft winter bran, in 100-lb. sacks per ton, $39@40; spring bran, in 100-lb. sacks, per ton, $38@39.

Wheat—No. 2 red, $1.89@1.94; garlicky, $1.74@1.83.

Corn—95@97c.

Oats—No. 2 white, 62½@63c.

PITTSBURGH HAY AND GRAIN

—Dec. 11, 1920.

Hay receipts have eased up considerably within the last week but the demand continues light. Buyers are loathe to stock up as they anticipate lower prices on account of the general decline in all commodities. There has been a surplus of clover and clover mixed hay here which coupled with the scarcity of buyers has had a very depressing effect on these two grades. Prairie hay also is slightly better, especially timothy hay but not enough to warrant excessive shipments, so that few cars started will bring top values. Straw receipts are extremely light and not enough to supply the demand. Top prices can be realized.

Oats and shelled corn dull and difficult to dispose of while there is a better feeling on ear corn. No. 1 timothy, $29@29.50; standard timothy, $27@27.50; No. 2 timothy, $25.50@26.50; No. 3 timothy, $21@22; No. 1 light clover mixed, $26.50@27.50; No. 1 clover mixed, $26@27; No. 2 clover mixed $20@22; No. 1 clover, $27@28; No. 2 clover $18@20; No. 1 oat straw, $17.50@18; No. 2 oat straw, $17@17.50; No. 1 wheat, $17@17.50; No. 2 wheat straw, $16.50@17; No. 1 rye straw, $17.50@18; No. 2 rye straw, $17@17.50; No. 2 white oats, 56@56½c; No. 2 yellow ear corn, 85@90c.

NEW YORK HAY AND GRAIN

—Dec. 13, 1920.

Feed—The market for mill feed was again quiet and the indifference on the part of buyers gave prices an easy tone as mills were anxious to do business and have been finding a very slow outlet for their reduced production.

Quotations: [illegible] feed [illegible] middling, $38 in 100-lb. sacks; red dog, $38 [illegible] inal, in 100-lb. sacks; Western spring bran, $36; standard middling, $34.50; flour middling, $42.50; red dog, $50, all in 100-lb. sacks, 30-day shipment. Oat feed, $18; rye middlings, $35; white hominy feed, $41, all in 100-lb. sacks. Cottonseed oil meal, $41.50; linseed oil meal, $46, in 100-lb. sacks.

Hay and Straw—Market continues quiet, steady and generally unchanged. New invoices are very light but the New York Central gave out four permits to each receiver last Friday. There are no more river barges to come forward this season, but four canal boats are lying at a Manhattan pier, held off the market by shippers' limits. Rye straw steady. Oat and wheat straw slow.

Wheat—No. 2 red, $1.94½.
Buckwheat—Per 100, $2.60.
Corn—Yellow, $1.01¾.
Oats—White, 61@64c.
Hay—No. 1 timothy, $39@40; No. 2, $37@39; clover, fancy, $28@39.
Straw—Rye, No. 1, $22; oats, $16.

NEW YORK MILK MARKET

Dec. 13, 1920.

The supply was just about equal to the demand last week and surplus reduced to an almost nominal figure. In the wholesale branch of the business, manufacturers of sweetened condensed and powdered milk are buying little or nothing; but conditions more favorable and prospects are that there will be some inquiry from that direction before long. The December rate for 3 per cent milk in 200-mile zone is $3.18 per 100 lbs.; 3.6 per cent milk is $3.42 and 4 per cent milk $3.58.

Receipts of milk and cream in 40-qt. cans for the week ending Dec. 11, 1920, were as follows;

Railroad.	Milk.	Cream.
Erie	38,569	2,126
Susquehanna	13,106	120
West Shore	11,114	1,223
Lackawanna	55,182	1,585
New York Central (long haul)	172,457	1,779
Ontario	45,816	1,844
Lehigh Valley	51,199	882
New Haven	6,250	58
Pennsylvania	11,985	384
Other sources	6,500	250
Totals	412,178	10,251
Same week last year	353,015	11,675

TOBACCO MARKET

—Dec. 11, 1920.

Rules governing the new public sales floor of the Tobacco Auction Sales Company were announced during the week. The first sale will be held the 20th inst., and at stated intervals thereafter in the main exhibition building at the Lancaster Fair Grounds. There will be a big tobacco show at same place in the forenoon of the opening day. Growers patronizing sale will prepare a sample of their tobacco by stripping 40 laths, the same to be representative of entire crop and properly sorted and baled, each grade separated by a strip of baling paper. Expert judges will score this sample which will then be offered at auction to the highest bidder. If price is satisfactory the sale will be confirmed by a contract whereby tobacco is delivered to purchaser as ready. Otherwise the sale is rejected and the same ple may be withdrawn or left to be offered at future sales. Price for selling will be 2½ per cent of amount received for tobacco. Growers are urged to use great care in preparing sample as it will be the sole criterion in satisfactory delivery. The same should be made as truly representative as possible including wrappers, seconds, rusted and paleburnt, fillers, scrap, etc. Tobacco farmers are reminded that the success of the new plan rests with them and that to say the least there can be no loss by patronizing the enterprise. It is stated that buyers, too, will benefit by being able to better judge their purchases and to purchase only such offerings as wanted; also by being able to buy without the necessity of calling on sellers, often at great expense and hardship. The management has declared a determination of "fair dealings and a high degree of satisfaction in the bigger results to be obtained."

WHOLESALE PRICES

Feed.—No improvement of any consequence is noted in the demand for feeds. Hominy and gluten feed remain strong. Wheat mill feeds dull and easier in many markets. Bran quoted Minneapolis $25.50; Cincinnati, $33, which are lowest quotations this year. Heavy wheatfeeds in good supply. Slightly improved demand for linseed meal. Cottonseed meal dull, unchanged, and offered for Jan.-Feb. shipment at $1 per ton less than prevailing prices in many markets. Alfalfa meal market heavy. Quoted—Bran $33, middlings, $32 New York; 36 per cent cottonseed meal $29 Memphis; linseed meal $49 Buffalo; No. 1 alfalfa meal $28, white hominy $36, St. Louis; white hominy for 30 days shipment, $32. Beet pulp $44 Chicago and in light demand. Kansas City quotes hard winter bran $27, gray shorts $31.50. Supplies are considerably in excess of demand in that market.

Seed.—Very little change in prices offered growers for grass seeds during past two weeks. Growers receiving per 100 lbs. $4.50 to $5 for timothy, $10 for redtop, $13 for Kentucky bluegrass, and $9 for orchard grass seed.

Grain—Wide fluctuations and a weak undertone have dominated the week's grain markets. A decided downward movement took place on the 10th as result of Federal Reserve Bank report stating that a beginning of liquidation or a reduction of bank loans is imperative.

INTERSTATE MILK PRICES

—Dec. 13, 1920.

The Philadelphia milk prices [illegible] the same

Farm Products Prices and Prospects

OUR BUSINESS LETTER

WILL LABOR BE DEFLATED NOW?

We have expressed the belief that business recovery would arrive at least by the middle of next summer. This statement has been based upon a study of the fundamental conditions which furnish an index of the course of business cycles of prosperity and depression which are characteristic of our present economic system. When a period of depression, such as the present one occurs, practically all commodities are affected in greater or less degree. Up to the present time, however, labor costs have been deflated very little.

The most conspicuous wage reductions have been made in the textile trade but even these have not returned as far toward the pre-war level as have prices of farm commodities or the general average of wholesale prices. Reductions in wages outside of the textile trade have not been numerous although the number of jobs has been reduced so that unemployment has increased. During the past week, clothing manufacturers began a fight upon the closed shop and uopn the current wage scale. Also in the textile manufacturing trade, announcement of the necessity of a general cut in wages was made. Many people have believed that we would pass thru the present period of depression without readjustment of labor prices to any marked extent although it is recognized that at some time or other, this readjustment must take place. However, if the developments in this field in the past week indicate that general wage reductions are to take place in the immediate future, it means that the general improvement in business conditions will be deferred until later than next spring or summer. It means also that prices for the products of the farm will not have the support of as generous a purchasing power on the part of the average wage earner as they have had for several years.

Business Outlook

While optimistic expressions upon the present business outlook have not been wanting during the past week, there is little evidence of actual improvement. In fact, there are coming to the surface, signs that the next few weeks may be very unsatisfactory ones in the farmers' markets. The Chicago Federal Reserve Bank stated on December 10th that the beginning of liquidation on the part of country banks must occur. In spite of the seeming curtailment of credits of the farmer, many of the banks in rural communities are closely loaned up and some of the banks located in agricultural districts which are members of the Federal Reserve System have borrowed from the central bank several times the amount of their basic allowance. Federal Reserve Bank loans in Iowa on November 12th were $91,000,000 compared with $61,000,000 on July first. If the Federal Reserve Bank insists upon the payment of such loans, it will necessitate the marketing of farm crops and live stock at a time when consumptive demand is at a low ebb and when prices for these products are so low that the sale of a given quantity brings in a much smaller monetary return than has been the case for several years.

The export corporation capitalized at $100,000,000 which is being forwarded by the American Bankers' Association has reached the final stages of organization. If its securities can be floated and the funds thus made available, for financing new export sales rather than merely funding the bank loans covering export sales previously made, it will be a strong supporting factor in the situation. The five per cent interest rate on these securities prescribed in the Edge Law restricts public interest in them to some extent, inasmuch as there are safe securities which can be purchased to yield considerably larger returns.

Bradstreet's index of commodity prices declined 13 per cent in November while Dun's fell 6.8 per cent. These show declines compared with their highest point of 34.6 per cent and 19.6 per cent respectively. The English index has declined 21 per cent.

Although iron and steel prices were among the most inflated of commodities as a result of war demand, they were slow to react. They are gradually slipping backward. Furthermore, in spite of lower prices and curtailment of output during November, the number of unfilled orders for steel declined about 9 per cent and that month was the fourth consecutive one to show a decline in such orders.

Hog Prices Off Again

A bulge of 75c in prices was a sufficient magnet to attract an increase of about 15 per cent in the hog supply at leading markets which with lower dressed pork prices carried hog values down to the level of December, 1916, and slightly below the low point of two weeks ago. The price spread is becoming much narrower as it usually does at this season. Eastern shipping demand is fairly brisk most of the time.

Still lower prices may be seen before the market permanently hardens. At present it has little resistance the supply being adequate for all immediate requirements. This condition will continue for another six weeks. Light hogs are still scarce showing that the country is disposed to go slow in marketing upon the present price scale.

Hog Products Accumulating

Provision prices have been lower along with declines in fresh pork and most other meats during the past week which are back to lower levels than at any time since the war began. Packers have been selling in the provision pit recently suggesting that stocks are accumulating. Fresh pork consumption is likely to be heavy at the new scale of prices and with the hog receipts falling below those of the past two years, at this season, stocks are not expected to pile up with extreme rapidity. New export sales of hog products are small compared to the scale prevailing a few weeks ago but lower prices are attracting inquiries again from abroad.

More New Zealand Lambs Arrive

The rise in the market for live muttons was checked by the arrival at New York of a cargo from New Zealand carrying 139,353 carcasses of frozen lambs and 120,003 carcasses of mutton. This cargo probably added as much to the total supply available for consumption as did the receipts of sheep and lambs at the principal markets of the United States during the same week. Although the dressed trade withstood the shock fairly well, receipts especially of lambs suitable for slaughter at leading markets expanded and much of the recent advance was lost. Since the sheep market gets no support from the possibility of selling wool, advances from the present level are not likely to be very marked especially since cattle and hogs are hovering around the lowest level of the year. However, some improvement can be expected within the next six weeks unless the business depression becomes more severe and carries the lamb market along.

Horse Marts Still in a Rut

The recent dullness in the horse markets has been accentuated by the approach of the holiday season. Receipts are ample for all requirements and prices are still around the lowest level of the year with little prospect of an immediate recovery, which will carry very far upward. Prices are quoted as follows:

Chicago—Heavy drafters, $165-260; plain and medium drafters, $120-140; expressers, $140-175; farm mares, $100-125; farm chunks, $75-105; wagon horses, $120-155.

St. Louis—Good to choice drafts (1400-1800 lbs.), $110-160; eastern chunks, good, $75-110; choice southern horses, $60-100; fair to good southern horses, $36-65; fair to medium southerners, $20-40; plain southern horses, $10-20; plugs, $5-10.

MAKING THE ENGINE GO

These are four essential features of a gas engine, all of which must be in perfect order or the engine will not go. First, the proper kind of a charge must be taken into the cylinder; second, this charge must be compressed; third, it must be ignited, and fourth, the burnt gases must be released.

In the summer, 90 per cent of the causes for the engine not starting is due to too rich a mixture being admitted, while in the winter it is more often because the gases do not vaporize. In the former case, close the needle valve and turn the engine is the open jacket type, pour open the valve again and the chances are that the engine will start. In the latter case, heat the curburetor with hot water and rags; or, if the engine is the open jacket type, pour hot water around the cylinder.

If the engine turns over easily, it is because the compression is weak. This is usually caused by the gases leaking past the piston, or by dirty valves. Use plenty of oil in the former case and grind the valves in the latter to rectify such troubles.

Good judgment in the use of electricity must be exercised to adjust difficulties with the ignitor.—Leonard W. Strickler

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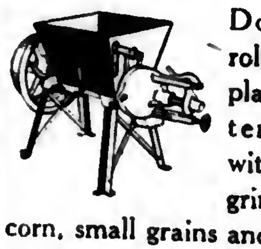

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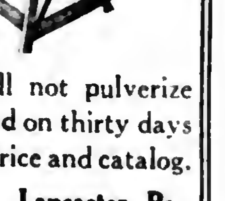

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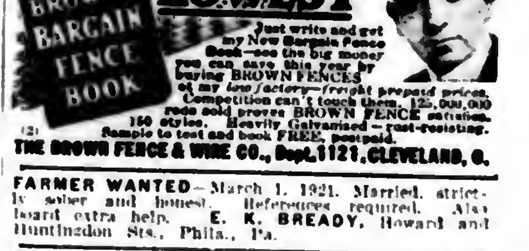

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THE INTERNATIONAL LIVESTOCK SHOW

(Continued from Page 2.)

chers' ideal.

The Angus Show

The Aberdeen-Angus exhibit found its leader in "Perintrain," an imported bull owned by Dr. . I. Huggins of Danbridge, Tenn., whose bull "Idolmere" won similar honors last year, only to die in a conflagration on his way to the Southland. Like the grand champion Shorthorn bull, he was a native of the Emerald Isle.

The carlot championship in cattle went to E. P. Hall, Mechanicsburg, Ill., who has won the honor five times. The cattle were 1100-lb. Angus yearlings. His 2-year-olds also were champions for their age and reserve champions, a record which is also a repeat for Mr. Hall.

The Steer Show

The Polled Shorthorns, Galloways and Red Polls failed to develop any sensational material in their steer dispays. A junior yearling Hereford grade exhibited by the University of Nebraska was made champion of the grade and crossbred steer exhibit. Ohio State University showed a number of creditable blue grays in this division, all of which were placed in the money, and the second prize in steer herds was won by the Ohio group. An interesting development was the awarding of first place to "Good Boy," a senior calf, whose dam was a Holstein. Ames Plantation showed some steers by Angus bulls and out of "yellow hammer" cows, which attracted attention. Red Polls and Polled Shorthorns showed a creditable line-up in the breeding classes as did the Milking Shorthorns.

The judges of grades and crosses and grand champion was Walter Biggar of Delbeattie, Scotland, whose father had judged in a similar capacity in 1903.

Hereford Show

The Hereford steers numbered 81 and made up the largest display of that breed ever gathered together in America. "Standard Supreme," shown by C. A. Tow of Norway, Iowa, was made champion of the breed. Col. E. H. Taylor, Jr., Frankfort, Ky., presented the calf, "Woodford Don," which won his class as well as the calf championship and reserve to the grand champion.

The oldest Hereford enthuiast in America, Thomas Clark, Beecher, Ill., is authority for the statement that the Hereford breeding classes composed the greatest exhibit of that breed ever assembled in America. The classes were large and it was hard to determine which end of the line-ups the judge was considering for the top. A surprise was sprung when "Repeater Junior," who has been a consistent grand champion at previous shows this year, and who is a truly remarkable example of Hereford individuality, was outdone by "Beau Best" for the senior championship. The junior champion was "Princeps Domino," who was also given the grand championship. The South American judge, R. Pareja Reissig, failed to appear, so John Thompson of Dover, Kan., was called upon for the task.

Draft Horses

The draft horse show was reduced in numbers, but the tops were superb. The Belgians were an impressive lot. C. E. Jones, of Livermore, Ia., captured senior and grand champion stallion honors on "Marcus," a 3-year-old. Bell Bros., Wooster, O., won junior champion stallion on "George Henry." The judging was not completed on the day allotted for this breed, the rest of the job being held over till late in the week.

The Percheron display was splendid in quality, but the classes were practically cut in haf. The yearling stallion shown by Springbrook Farm, Walkerville, Md., was brought out in splendid form. Two-year-olds numbered 25. "Rectorat," a 3-year-old, also shown by Springbrook Farm, was the senior and grand champion, and was considered by some critics as the sensation of the draft horse show. A. L. Robison, Pekin, Ill., showed a number of his own breeding in the younger classes, which were placed toward the top.

The Clydesdales inspired enthusiasm. The tops were unusual combinations of draftiness, style and action, with the correct pattern of underpinning characteristic of the breed. The senior and grand championship went to "Wee Donald," owned by C. A. Weaver, Regina, Sask., Canada. Needless to say he is not wee!" R. A. Fairbairn, Newmarket, N. J., won the junior championship in the stallion contingent. "Rosalind," an imported mare, shown by George A. Cluett, Williamstown, Mass., won the senior and grand championship in the females, while an excellent black 2-year-old filly from Iowa State College won the junior championship.

The Swine Show—Barrows

The exhibit of barrows was reduced in numbers but all the leading breeds were well represented except the Chester-Whites, which breed nevertheless captured the grand championship barrow honor. This barrow, shown by Iowa State College, was extremely smooth-sided and very trim below but he lacked the stretch, scale, poundage and uniformity of width of the Poland-China champion, which would also have looked good wearing the grand champion's purple.

The Berkshire barrow, shown by Penna. State College, which won breed championship, was also a strong contender for the grand championship. The best barrows were all found among the more mature classes. Presumably "big type," which now dominates even the barrow shows, rounds out into ideal barrow form only after some age has been attained. Furthermore, the big barrows have been the winners recently, and possibly greater efforts were concentrated upon fitting them.

The Berkshire breeding classes were good altho not sensational. The Hampshires were numerous and a good lot also.

The hog carlot grand championship prize went to a load of Hampshires shown by J. M. Ballard, Marion, Ind. They were so growthy that they were shown out of the proper class for their age.

The Sheep Show

The sheep show reflected the same situation as in horses and hogs. Closer culling left smaller classes but more uniform excellence thruout the line-up. The grand champion wether went again to the Pines Farm, West Point, Ind., on a yearling Southdown, purchased from the bureau of animal industry's flock. Reserve champion went to Ohio State University on a splendid grade Shropshire wether, which had won championship among the grades and crosses.

Notice that two-thirds of "promotion" consists of "motion."

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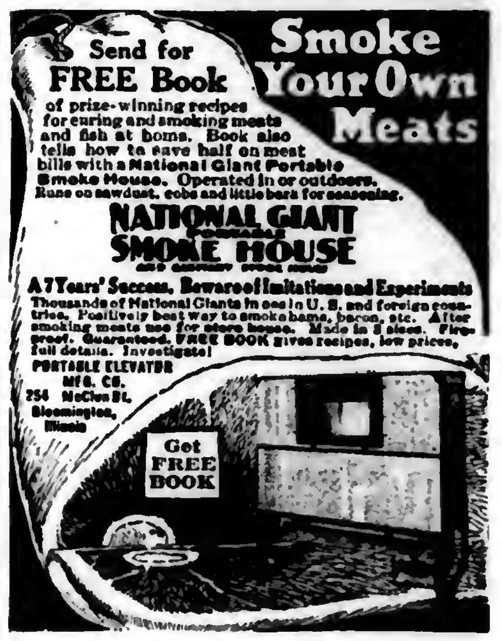

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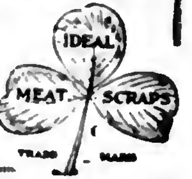

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Large Type Reg. Berkshires of all ages for sale. Select a breeder from a large litter. Pay when you see stock. No cash in advance.
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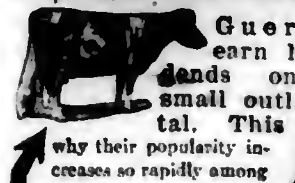

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Barred Rocks (pullet mating). Excellent layers. Buttercup, Ancona cockerels and pullets. Range raised. Prices right. J. K. Cadwallader, Wellsville, Pa.

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Miscellaneous

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Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Lamenitis (Founder).—Pin Worms—I have a horse 10 years old that has been ailing for the past three weeks. Our veterinary has been treating him for founder, but the animal shows no particular improvement. Nearly, if not all the soreness seems to be in her fore feet. She has never been overfed on grain, not worked hard and had good care. Therefore, I fail to believe her foundered. She drinks large quantities of water, has good appetite for food, but is very stiff in front. She is bothered with pin-worms. J. H. B., Stewartstown, Pa. Doubtless your veterinarian is right in his diagnosis of the case. Stand her in wet clay 3 hours a day. Shoe her with wide-webbed shoes and give them plenty rolling motion. For pin-worms, wash out rectum three times a week, using one part coal-tar dip and sixty parts tepid water. Perhaps, it will be a mistake to allow your mare to go without walking exercise too long.

Horse Out of Condition.—Can you tell me what is wrong with my ten-year-old horse? Up to 8 weeks ago he was seemingly healthy. Since then he is dull, hide-bound, moves stiff behind, had few pin-worms, none now. He has recently lost much flesh that he has the appearance of being another horse. He has good appetite. L. S., Montgomery, Pa. Mix together one part powdered sulphate of iron, one part flowers of sulphur, two parts powdered gentian and two parts salt. Give him tablespoonful at dose in ground grain 3 times a day. His grinder teeth may require floating. You should change his fed and perhaps increase his grain ration. Groom him twice a day and don't forget to ventilate his stable at night. Let me know result of treatment.

Chronic Backbone—For the past three years one of my horses has been troubled with a ringbone. Our veterinary treated him for ringbone lameness, but the horse is no better. I am anxious to have your advise and to know if you believe him cureable? He is always lame, either when walking or trotting. L. K., Conklin, N. P. First of all we know that nature deals kindly with such cases, always making an effort to effect a cure. She has been at this case for three years, besides she has had the assistance of your veterinarian, both have failed. If the ringbone is situated low down, I would say, the horse is incurable; however, the lameness may be mechanical—a stiff locked joint causing seeming lameness, but with little or no pain. Proper shoeing will afford partial relief. Slightly elevate the heel, shorten toe, and give shoe considerable rolling motion. Never drive him faster than walk.

Feeding Potatoes to Horses—Is it harmful to feed potatoes or potato peelings to horses? Have recently noticed one of my horses passing a few worms, I gave him salt and ashes in his feed. F. S. W., Moravia, N. Y. Feeding horses a limited quantity of either potatoes or peelings will do them no harm, but some good, but as a worm remedy, feed carrots or [illegible]

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A BEAUTIFUL [illegible] 22-month-old heifer Holstein, bred to grand registered bull, dam a 10,000 lb. milk cow. Price $65.
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True Value
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True Value

True Value Dairy Feed is a combination of those nutrients which the dairy cow can most *profitably* transform into bodily maintenance and milk. The cow uses the energy received from the feed *first* for bodily need and *then* produces milk from the balance. Some nutrients can be used most profitably for body maintenance and others for milk production. Hence, it is absolutely necessary to have the *exact balance* of nutrients to make the most profit.

In True Value Dairy Feed we have combined *only* those nutrients which the Dairy Cow can convert into vital energy and milk *at a profit*. The profitable cow will not fatten on True Value Dairy Feed but she will maintain her ***highest*** standard of bodily vigor—produce her ***maximum*** amount of milk—and return the ***greatest*** profit on the ***money*** invested.

True Value Stock Feed like True Value Dairy Feed is a profit making feed. It is designed first of all for young stock. That is, it will furnish energy for plenty of rapid growth and development and still not fatten. Because the nutrients in True Value Stock Feed are directly available for use, the development of young stock is made at a wonderful profit.

True Value Stock Feed forms the base for a very profitable dairy ration when used in combination with silage, ground corn or oats and oil meal or cotton seed meal.

Ask your dealer for True Value Feeds. If he cannot supply you write us.

LADISH MILLING CO.
DEPARTMENT D **MILWAUKEE. WIS.**

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PENNSYLVANIA FARMER
AGRICULTURE
THE KEYSTONE OF
NATIONAL PROSPERITY
ESTABLISHED 1880
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PHILADELPHIA, PA., SATURDAY, DECEMBER 25, 1920
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THE APPLE MARKET SITUATION

The Unfavorable Condition of the Markets May Influence Future Orchard Development.

DR. J. P. STEWART,
YORK CO., PA.

THE UNFORTUNATE market situation continues to dominate the mental horizon of average apple producer, unless he has either been fortunate enough to have made his sales early, on an iron-clad contract, or else has got tired of waiting and decided to let his fruit go for whatever he could get. The continued mild weather has enabled everyone who had any fruit worth picking, to get it in and to continue dumping it on his nearest market without any special expense or precautions in regard to storage. This has delayed the improvement that everyone has been expecting to appear around the holidays, and when one considers the numerous home supplies that so many thrifty housewives have laid in for the winter while the buying was good, it leaves a big question whether any important improvement will come in time to be of service to the holders of several of our more extensively grown varieties.

Such varieties as Stayman Winesap, Stark and Gano, may be capable of being held long enough to catch the rise that undoubtedly should come before the season is over, but this is doubtful in the case of the York unless stored in ventilated packages and provided with some means of keeping the air around the packages in more or less constant motion. If this latter treatment is provided, however, any of the varieties that are especially susceptible to scald can be held for at least a month, and possibly two months, longer than when no provision is made for ventilation.

Car Movement of Apples

One interesting feature of the present situation appears in the fact that the total car movement of apples in the entire country this year, up to Nov. 30, is only 4,966 barrels more than the shipments to the same date last year. Such an increase in supply is by no means sufficient to justify the remarkable slump that has occurred in the wholesale market, especially in certain varieties, and it augurs well for the immediate future of that market, altho no such prices as those generally obtained last year are to be expected, th[illegible]

As in other lines, the retail market has not fully reflected the reductions that have occurred in the wholesale fruit market. This has undoubtedly further injured the wholesale situation by curtailing consumption at the very time that it should have been encouraged by all legitimate means. When the effects of the average common storage conditions, in developing rots and other losses, begin to be felt, however, it is very probable that the current relatively high retail market will prove to be an asset, unless it is further increased in proportion to the expected increase in wholesale prices.

The Road to the Lake

The general drop in the market has lead to the usual large number of rejections of shipments properly sold, under such conditions, and to an unusual number of "kicks" on the quality of the fruit shipped, the prime object of which was to get a reduction on the price agreed upon. This of course was very embarrassing when one was already busy with the harvesting, and especially so when the shipment had been made to a very distant market. All of this tends to re-emphasize the value and necessity of a much wider utilization of the practice of co-operative marketing. When one considers that the success or failure of an orchard depends so completely on the results obtained in marketing its products, and that this cannot [illegible] be attended to properly by the owner himself during the busy harvesting period, especially under present labor conditions, the need of expert assistance in this phase of the business [illegible] obvious.

Unless the orchard is very large the only practical way of securing this expert assistance in marketing is thru co-operation, and it is just such unsatisfactory years as the present which gradually bring the growers of a community or other natural unit into an effective organization. That such organizations can be effective is demonstrated by the present existence of over 11,000 successful examples in the agriculture of this country, which do an annual business of several hundreds of millions of dollars.

Some of the advantages obtainable from a good co-operative organization are as follows: Improvement and standardization in the grading and packing; reliable and prompt information on both crop and market conditions; the development of a proper label or trade mark which can be used to interest and remain on the [illegible] leading eventually to the development of a permanent clientele which [illegible] year, at [illegible]

Hints on Selecting Show Corn

IF YOU want to be a prize winner make a preliminary selection of 40 to 50 ears of good looking corn, and from that make your final selection. Your final selection is to be 10 ears. Select them as to uniformity in size, shape and color. See that the tips of each ear are the same shape and well covered with well developed kernels. The butts should not be enlarged or contracted. The cobs should all be red for yellow corn and white for white corn. Too large a cob gives low per cent grain and too small a one does not give high yields. They should be one-half to two-thirds the diameter of the ear.

All ears should be free from diseases. They should not present any weathered or bleached or mouse-eaten appearance. They must be mature, firm and hard, kernels bright and plump with an oily appearance, not shriveled or blistered. Adherence of chaff to tip cap of kernel indicates immaturity.

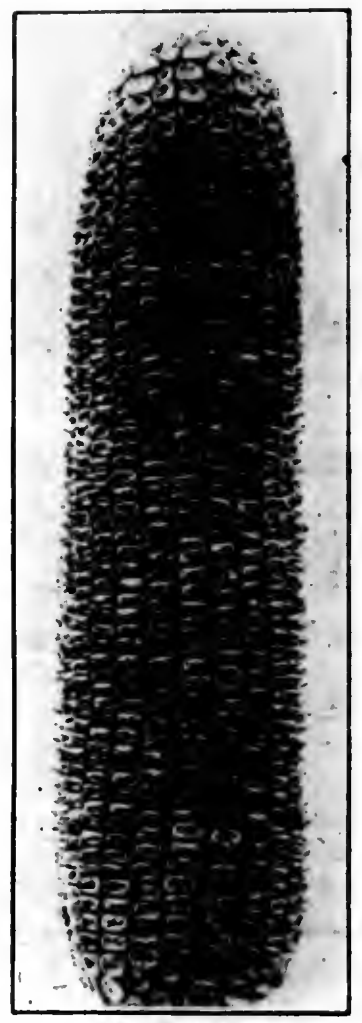
Kernels from all ears should be the same size and shape. Irregularity in shape and size of kernels means an inaccurate drop in the planter, an uneven stand and a reduced yield. They should be distinctly dented but not too much as it indicates immaturity and chaffiness. See that there is no mixture in the color of the kernels of the ten ears.

In selecting pop corn or sweet corn give particular attention to uniformity of the ears in size, shape and color and to maturity.

You may remove two kernels side by side in the same row from the lower three inches of the ear in making your examination.

Now groom your ten ears very carefully. The corn in a corn show must be groomed the same as the horses in a horse show. Remove all pieces of husk and silks, cut the shank off close and carefully, this will add to the appearance of your exhibit. Never try removing any exposed tips or mixed kernels. The judge will question how much you cut off and while the question is in his mind, place your exhibit at the foot of the class. Kernels substituted for mixed kernels are sure to come loose when they ought not. Play fair and square.

In handling or carrying your exhibit it will be much better to wrap each ear separately in paper and then pack firmly in a box. Don't forfeit your chance of being a prize winner by handling your corn carelessly.—Geo. L. Schuster.



A Fine Type.

PROTECT OILS FROM DUST

Recently I was in a farm garage where the owner kept his pleasure car and all the oils and greases for his tractor. There were a number of small hard oil cans standing in one corner, with lids half on, the floor of the garage was littered with debris, clouds of dust were carried into the open doors and a lad filling the grease cups of the tractor was skimming the dust and sticks off the top of a can of grease before using the grease.

All grease and oil cans ought to be kept well covered, to prevent dirt getting into them. Grit and fine dust are ruinous to bearings when carried into them in the lubricant, causing them to wear rapidly and often causing them to heat. It is such a simple matter to keep the oils clean that it ought not to be neglected.

A small cupboard or chest with drawers in it is a good place to keep oils. Some build a small cupboard right in a corner of the garage. We use a chest about ten feet long with drawers a foot deep, which in addition to oils will hold any other articles about the garage.

The fluid oils for the tractor and car are kept in big metal drums, of fifty gallons capacity, and are drawn from the drums as needed with a regular fluid oil pump. In this way there is absolutely no danger of having dirty oils and as they are high grade oils they need not be strained or filtered.

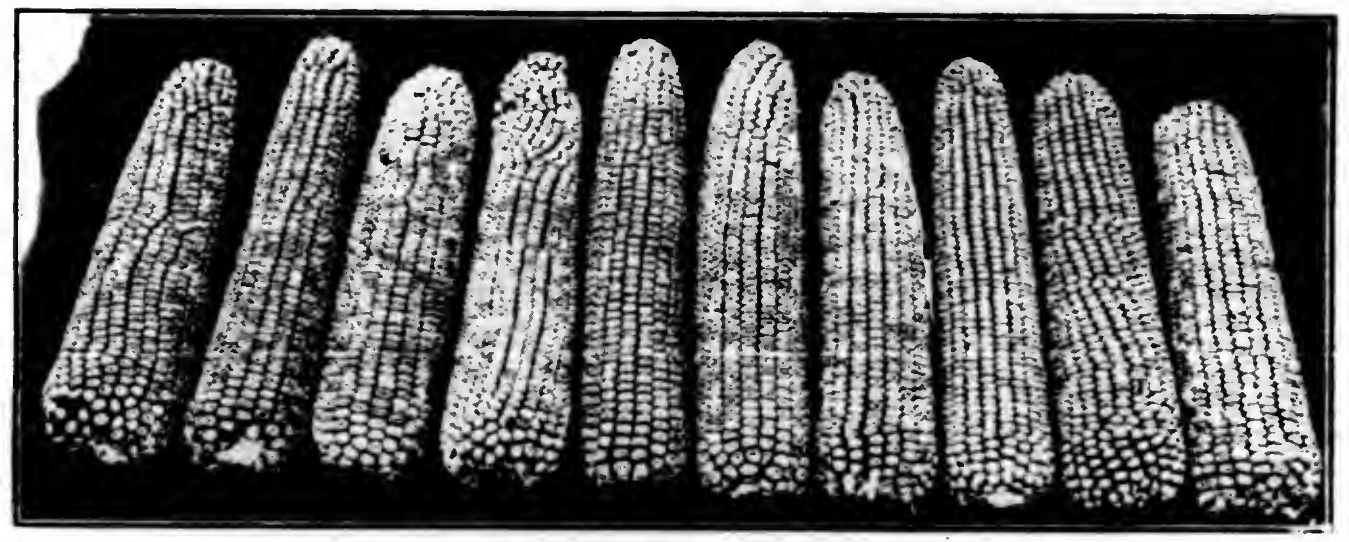
Hard oils are usually best handled in the cans or kegs they come in. The lids of small tin cans of ten and fifteen pound capacity are easily slipped back on, to shut out dust. A good cover can be made for kegs.—J. L. Justice.

POTATO GROWERS' MEETING

The New York State Potato Growers' Association has been holding a series of meetings at Rochester, Syracuse, Malone, Belmont and Hudson Falls to determine on measurures to be recommended for final decision at the annual meeting of the association to be held at Ithaca in February.

One of the main things to be determined is whether a central marketing organization shall be established. A committee consisting of President E. E. Hults of Marathon, E. V. Hardenburg, of Ithaca, secretary, and L. R. Simons, representative of the marketing committee of the state farm bureau, recently studied methods followed by Michigan growers along this line. The reports are being given at the meetings.

At the Rochester meeting, one of the first held, comprising the growers of the western counties of the state, the sentiment of the growers was expressed as against the formation at present of a state marketing program for table stock. It was felt that the growers thruout the state were not yet ready to undertake such a venture.



Ten Poorly Selected Ears

It was the opinion of representative growers, present from seven counties that the present marketing plan for certified potato seed by local clubs should be extended and improved, with the object eventually of having all clubs federated into a state association. A resolution to this effect was adopted and will be presented at a state-wide committee meeting some time later and to which the growers instructed the farm bureau managers in the respective counties each to appoint one delegate.

In the discussion on the question whether this state should have centralized bodies to handle both the certified seed and the table stock it was pointed out that conditions in New York state are much different than those of Michigan, where the growers' organizations are strong. It was said that the Michigan growers produced only one or two varieties on a large scale while, in this state there is a great diversity. In Michigan also the growers of the upper peninsula and the extreme northern corner of the state have very long-haul shipments and it is necessary to organize to protect themselves on rail rates.

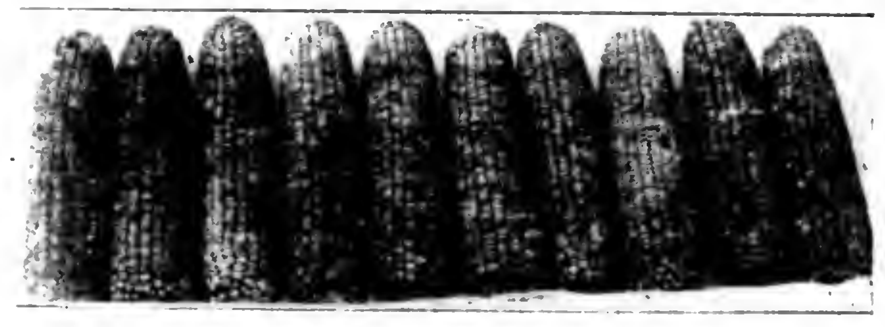
The number of growers in the state association has grown from 14 in 1914 to over 300 in 1920, according to Secretary Hardenburg, about 200 of whom have their fields certified.

LEST WE FORGET

During the past few years we have heard so much about better live stock, better apples, better corn, better potatoes, etc., that we have almost forgotten the improvement of the best crop that America grows, viz.: its people. It is useless to expect this country to develop as a nation by putting all of the stress upon the production of better crops of the vegetable kingdom and of the lower order of animals and forget to develop a higher degree of manhood and womanhood among that higher order of animals who is to have dominion over all things.

In reviewing the pages of history, where do we look for the greatness of ancient empires? Do we look among the cattle to find some high producing animal? Do we look to find how much of this or of that crop an acre of soil produced? No, not so. We are not concerned about these things so much. The things that we are interested in are the people of the country. Ancient Greece is remembered for her men of great learning. Rome for her grat statesmen and generals. We are interested in what the people of these ancient countries stood for and believed in. We are interested in the intellectual attainments that they were able to acquire. The fact that they were able to raise two blades of grass where one grew before is given but a passing notice.

And so today, lest we forget, in this twentieth century we should be more interested in the development of rural people to a higher state of intelligence and belief rather than in inducing them solely to produce more at any cost. I believe that there is many a hard working wife who is carrying the water for household use from a spring or well some hundred feet away so that the husband might gamble a little deeper in pure-bred stock. Many a child's God-given talents have been sacrificed and left undeveloped because of the excessive toil and drudgery of the farm. If eight hours of a man's labor in the shop will produce enough income to keep his household, and some besides, then eight hours of productive labor on the farm should do the same. It may not be in line with the common expressions of the day, but I must say that farmers should work less, cut out the drudgery, and think more, study more, and demand more for a day's work. The world should not be so much concerned about lowering the cost of living as it should be in developing a higher and a nobler manhood and womanhood among all producing classes. I do not wish to discourage pure-bred stock, but pure-bred stock and pure-bred people make a good combination.—V. R. N.



Blue Ribbon Winners at a National Show

Soils and Fertilizers

Conducted by Dr. J. G. Lipman

Our readers are invited to send us their problems on soils and fertilizers and they will be answered by Dr. Lipman in this column.

THE CAUSES AND EFFECTS OF ACID CONDITIONS IN SOILS

Sour or acid soils are quite common in the humid regions of the United States and of other countries. The older soils in these regions are more acid or are more frequently acid than soils of the same type that have been under cultivation for a shorter time. For this reason, soil acidity becomes more and more of a practical problem in the older agricultural sections. Hence, a knowledge of the nature, the causes and effect of soil acidity is desirable and necessary for every farmer who would utilize his land to the best advantage.

Recent investigations show that soil acidity may be due to different causes or to different chemical changes. It may be due to materials of mineral origin or to those of vegetable and animal origin. Not many years ago it was believed that soil acidity was due entirely to substances of vegetable origin. It was claimed, therefore, that soil acidity was derived almost entirely from soil humus. We know now that soils very poor in humus may be just as sour, or even more sour than soils that are rich in humus.

As soils grow older they lose, on account of leaching, much of their lime and other materials capable of neutralizing acids. Soils that receive large amounts of rainfall will develop acidity faster than soils receiving smaller amounts of rainfall. Where fertilizers are used more or less reguarly the development of acidity is encouraged. Materials like potash salts, acid phosphate and ammonia salts—particularly the latter—will hasten the rise of acidity in soils. But, since the degree of acidity bears a certain definite relation to plant growth, it is worth while to inquire into the nature of it, and as to the effect which it may have on soil bacteria, soil fungi and the cultivated plants.

It has been definitely established that a slight degree of acidity is not objectionable either from the standpoint of soil bacteria or the crops themselves. But, as the degree of acidity is increased, the useful soil bacteria, particularly those that produce ammonia and nitrates and those that help to accummulate nitrogen from the air, are injuriously affected. It is not necessary to keep a soil sweet, but it is necessary to prevent a soil from becoming too sour. This fact gains in importance as we recognize that by increasing the degree of acidity we not only gradually suppress the activities of the useful bacteria, but also encourage the multiplication of fungi that may interfere with the feeding of the crops or actually injure the plants. Different kinds of root rots, the development of club root in cabbage, cauliflower and other members of the cabbabe family, are examples of this sort. By reducing the acidity of the soil these fungi are hindered in their growth and the plants protected against their attacks. On the contrary, there are other fungi which thrive best when the soil is sweet or has has only a slight degree of acidity. This applies particularly to the organisms that produce scab on potatoes and beets or scurf on sweet potatoes. It, therefore, becomes the problem of the potato, beet or sweet potato grower to increase the acidity of his soil to a point where the objectionable fungi would not cause serious injury to his crops and yet avoid an acidity great enough to interfere with the activities of the useful bacteria or with the welfare of the crop. Fortunately, chemistry has in recent years placed at our disposal a method whereby we can measure accurately the degree of soil acidity that would suppress the activities of these objectionable bacteria without interfering with the crops. Fertilizers and other materials that increase the degree of soil acidity are now being used successfully for this purpose. Acid phosphate, sulfate of ammonia and particularly sulfur can be used in such a manner as to increase the soil acidity to a point where potato scab organisms are no longer troublesome but the potatoes themselves and the bacteria which are relied upon to supply the crop with nitrates are not injuriously affected. With the more refined chemical methods now in our hands, we are in a position to measure carefully the degree of acidity at which different groups or different species of soil micro-organisms would best function.

Recent investigations show also that the damage done to crops in acid soils is not always due to the acids themselves. It has been shown that in some acid soils there are developed poisonous products, particularly certain salts of alumina and iron, that poison the plants. In cases like these the use of lime is effective because the poisonous compounds of alumina and iron are made insoluble rather than because of the lessening of the degree of soil acidity. It has been demonstrated, for instance, that the application of large quantities of acid phosphate produces beneficial results even though the degree of soil acidity is not lowered, but the soluble compounds of alumina and iron are made insoluble. Such helpful changes are most readily produced in heavy, poorly drained clay or silt soils. It has been shown, further, that insoluble phosphates and potash compounds become more readily soluble in acid soils than they do in sweet soils. In certain acid soils ground phosphate rock or bone meal often give as good results as acid phosphate. This advantage is more than offset by the diminished production of nitrates and the diminished accumulation of nitrogen by legumes. There is also danger where soils are excessively acid of losing too much lime, potash and even phosphates from the soil. It is evident, therefore, that the problem is a more or less complicated one and involves a careful study of soil type, the nature of fertilizers used and the nature of the crop grown. It will be possible, as our soil investigations are continued, to determine the best degree of acidity for each soil and for each crop. Hence, the more refined methods for measuring soil acidity are a welcome addition to the equipment of the soil investigator.—J. G. Lipman.

Farmerettes Play as Well as Work

How the Children in One Community Go to School

A BUSINESS FARMER'S WIFE

A farm woman ought to know all she can about the job she is in. No other occupation that people engage in gives the wife this opportunity. In most other occupations the masculine end of the partnership is away a half day or a whole day at a time or maybe it is a week. The only time for consultations and expression of opinions is once a day or a week as the case might happen to be.

Yet so many of us farmers do not give our wives the credit even of being interested or of even wanting to be. Because we don't do this with our own wives we think it is the same with other men's wives on the farm. Isn't it true that you have phoned to Mr. Jones about a corn binder and when he wasn't in the house you waited till he came in or sent for him? And then there are 9 chances in 10 that Mrs. Jones could have told you just as much as he did after that waiting and bother. But you didnt' ask her. What she ought to have done was to ask you if there was anything she could do about it. You might have thought of asking her then.

A farm woman in most cases knows the plans for the day on a farm. She can't very well help herself. She sees the teams hitched up and the tools they are hitched to. All the business that is done with outsiders is done over the telephone usually and anyone in the house knows what it is. Give the farm woman credit for knowing something. She won't depreciate her credit I'll venture to say.

I think a farm woman ought to know something about the banking end of the farming business. She ought to be interested in the financial conditions and regulate her spending to suit the conditions of the farm treasurer. And in most cases she will if there is a chance for her to know. My wife is able to take care of the banking end of the business. She didn't like to start it at first but after a few trials she got used to it and now likes it. A few weeks after we were married we went to the town where I bank and I introduced her to the cashier. She made out a check then and drew out ten dollars. After a few times it was easy. Now she writes a check as easy as I buy a package of chewing gum. Of course she has made mistakes. She forgets to endorse a check sometimes or such minor matter. Yet. I have been banking this way for about 15 years and I have to be reminded by the cashier sometimes that I haven't signed my name on the checks.

My wife takes the checks from the farm into the bank and puts the amount on our check account. She also has an arrangement with the bank to sign my name when we happen to want money from there. She is a partner and why shouldn't she do this business? She drives the farm car and so can save me a lot of time in the busy season by doing these errands. Some of it can be done by mail but as some smaller buying must be done every week or so the trip must be made anyway. Her name is on the letter head. It should be, I think. She helps to make the farm go. I could be sick a long while and the farm business wouldn't suffer. If we'd borrow money and it would fall due while I was sick she would take care of it. I keep a list of notes due and notes due the other fellow with dates for each. She knows where the whole outlay is. There's little chance to be mixed up.

We also have a check book apiece. We only have one account though. She signs her checks and I sign mine with our own name. The bank knows about it and its simple. After spending money by check we straighten our accounts and know just where we are at. She doesn't have to come to me and say: "Jim, I want $8 today, the boys need a few things." She gets them when she thinks they're needed and writes a check for it.—E. R.

His Ideal

Father: Have you absolutely no ambition in life, my son. Son: Yes, father, I would like to live so that when I die they will name a cigarette after me.—Life.

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PHILADELPHIA, PA., DECEMBER 25, 1920.
VOLUME 48 NUMBER 26

OUR JOB is to serve our readers. Whenever you are puzzled, write to us and we will help you if we can.
—The Editors.

A Personal Word

WITH THIS number we close the 48th volume of Pennsylvania Farmer, 16 of which have been published by the present management. In the eight years we have had the pleasure of publishing the paper the circulation has increased from a few thousand to more than nine times the number of subscribers on the books when we took hold of it. When it is considered that during more than five of those eight years we have been handicapped by war conditions and the attendant interferences, we feel justly proud of the accomplishment. With peace times once again returned and the likelihood of a speedy return to normal conditions we hope to still further develop and improve Pennsylvania Farmer. We are sanguine in our hopes because of the tens of thousands of friends we have made and the certainty we feel that they will continue as in the past to give us their loyal and aid support. The many letters we have received in response to our request published December 11 for criticisms and suggestions shows how fully our readers appreciate the paper and their thoughtful suggestions show their willingness to co-operate in making it still better. We hope many others will express their sentiments. We cannot tell you how helpful these letters are or how much we appreciate them. You can help us in our ambition to do still better by writing us frequently, by saying a good word to your neighbors and by sending in your renewals promptly. Those whose papers are stamped Jan. 1921, should renew at once.

With our sincere thanks for past favors and loyal support, and with hopes that the future shall contain more joy and less sadness for every-one, we wish you a

MERRY CHRISTMAS AND A HAPPY NEW YEAR

The State Grange Meetings

THE RESOLUTIONS passed at the different State Grange meetings during the past few weeks show a remarkably uniform sentiment existing among farmers on most subjects. This unanimity is especially notable in regard to taxation, maintaining and enforcing the Volstead Act, opposition to universal military training and a large standing army, improvement of the rural schools, co-operating for business purposes, development of the forests, enactment of necessary rural credit laws, etc. These are vital subjects and the welfare of agriculture depends upon the intelligent handling of them by our legislators and executives. The fact that so large a portion of our farmers recognize them as important and are willing to back up their demands is most encouraging. The next thing necessary is a willingness to agree upon details. The end is often lost by quibbling over minor matters and by being unwilling to compromise in non-essentials.

One noticeable difference in attitude towards an important subject is that of relationship between the Grange and the Farm Bureau. In New York and New Jersey the Grange is intimately and actively associated with the move for large Farm Bureau memberships and the state and national federation idea. In Pennsylvania the Grange is opposed to the idea of developing another farmers' organization, altho expressing strong sympathy with all the institutions back of the extension service, and also with the work of county agents. The reason for this stand, as voiced in a resolution on the subject, being that the Grange is all the organization needed to take care of the subjects affecting the welfare of agriculture; that it not only meets the need for social, educational and political purposes, but that it is also a logical parent body for the promotion of business and commodity organizations.

Rural School Improvements

THE FOLLOWING was sent to us by our Harrisburg correspondent:

Doctor Thomas E. Finegan, State Superintendent of Public Instruction, stated today that there was an absolute failure on the part of many people in the rural sections of the state to properly interpret the movement relating to the consolidation of schools.

In the first place, no consolidation will take place which is not authorized by local authorities. The State Department will undertake to show various communities thruout the state the advantages of the consolidated school. If a community desires the better educational facilities for the children, it may adopt such plan. If it prefers the meager facilities of the old-time one-room school, the people may continue such school

No consolidation will be recommended by representatives of the Public Instruction which will impose hardship on either the children or their parents because of the distance which the children will be required to travel to attend a consolidated school.

We are glad to help disabuse the minds of those who are fearful of having some calamitous innovation forced upon them from the "outside." However, we would urge upon the fearful that the same liberty be granted to other communities who may wish to make such changes in their schools as wisdom directs. In other words, since each township may decide for itself what kind of schools it shall have, we see no occasion for a state-wide opposition to the plan to allow communities to establish consolidated, vocational, or any other kind of school they may desire.

"Building a Food Monopoly"

UNDER the above caption a leading New York commercial journal voices its protest at the efforts Congress is making to alleviate the plight of farmers in the present conditions of markets and credits. It states that Government price-fixing and exceptional aid to the farmer during the war stimulated the idea that any measure might be taken with impunity, and tries to create the impression that farmers are demanding class legislation.

The only thing wrong with the editorial is that the editor is either ignorant of the facts or is woefully deluded. In the first place, as all farmers know, any direct benefits accruing to farmers because of Governmental price-fixing during the war, were negligible. In the second place, the demands that are being made for tariff adjustment or credit facilities are only for the purpose of placing farmers on an equal footing with others in these matters. The opposition to the Capper-Hersman act which would permit farmers to form co-operative selling organizations comes from the go-betweens and their henchmen. The endeavor to create the impression that farmers are conspiring to create a food monopoly is balderdash, pure and simple. Co-operation is a privilege that naturally belongs to the business of producing, storing and distributing of food and provides no privilege that is not enjoyed by every other big business in the land. It would, however, if fully carried out, eliminate that class of profit-takers which performs no useful service but which continually plays the producer against the consumer to the financial loss of both.

The sooner certain newspapers cease trying to spread false fears by misrepresentation of facts the sooner people will respect their editorial opinions.

The "Middleman"

WE HAVE often wondered whether there is not a misunderstanding in many minds as to what is meant by the term "middleman." Denunciations are frequently so sweeping that all influence is lost because the speaker's or writer's lack of knowledge is so evident that all he says is rejected. The tabood middleman—the one which human progress demands should be eliminated—is the one who performs no useful service, who takes toll from the public for which he gives no value. But in reality, anyone who does anything to a product from a time it leaves its origin to the time it reaches the ultimate consumer's hands is a middleman. To make a concrete illustration which is at the same time ridiculous is that, if every "middleman" in the grain trade were removed it would mean that the wheat raiser would grind the wheat, transport it, bake and serve the bread upon a platter to the city consumer. The wool produced would manufacture cloth, make it into suits, transport them directly to the buyer and fit them to his person. There is a place in the economy of organized society for "middlemen;" in fact, it would be impossible to conduct any line of business without the necessary ones. While in some instances we permit the existence of unnecessary toll-takers, experience has proven that the transportation and distribution of the world's necessities is more cheaply and efficiently performed by those who make that work their business and are thus able to continually improve the service.

Our Washington Letter

Prices of farm products continue to decline. The situation on the farms in large sections of the country daily becomes more acute. Insistent demands for relief are coming from all parts of the country. Petitions and demands for immediate emergency remedial legislation have encumbered the mails of representatives from farming districts. Delegations of farmers and senators and congressmen from the great agricultural states have presented the urgent needs of farmers in emphatic language at the hearings and conferences, and on the floors of the House and Senate.

Congress is fully informed as to actual conditions. Nevertheless, with the exception of the introduction of a large number of bills and resolutions intended to help the farmers, and lengthy debates on trivial points of procedure, nothing was accomplished the first eight days of the session to provide the much needed legislation. There is an apparent effort being made by certain senators to delay action, and a very small group of senators can do much to thwart the will of the majority. Notwithstanding all the talk about the importance of agriculture and the necessity for fostering the farming interests as a means of safeguarding the food supply of the people, there are few men in Congress outside the strictly agricultural states and districts who show any interest in the farmers' welfare, and many manifest a spirit of opposition every time a proposition aiming to benefit agriculture comes before Congress. These men, it is evident, are going to do their best to delay the agricultural relief bills, until necessity compels them to be lain aside for the passage of appropriation bills.

* * *

The proposed embargo on wool has created much discussion. In urging quick action upon his bill placing an embargo on wool and woolen goods, Senator Smoot said "that unless something is done very soon, as far as the wool industry of the United States is concerned, the industry will perish."

* * *

An embargo on wool was urged before the House Ways and Means and the Senate Agriculture committees, by representatives of the wool growers. Dr. S. W. McClure, of the National Wool Growers' Association, told the Senate Committee that the embargo should be retained until the revision of the tariff. According to Dr. McClure's testimony there is a sufficient supply of wool now in this country to meet the demands of the nation for two years, without the production or importation of another pound, and there are enormous supplies in other countries that have been unable to transport their wools for the last three or four years. These statements lead Senator Kendrick to suggest that "with the door left open for other wools to come in to this country the situation is absolutely hopeless for the wool growers."

* * *

Debate on the Gronna bill for government regulation of the meat packers was opened by Senator William S. Kenyon, of Iowa, who called attention to the present unsatisfactory condition of the stock raising industry, with the price of hogs the lowest in years and cattle and hogs being rushed to market. The purpose of the bill to regulate the packing industry is designed to give the producers a square deal. "The stock raisers have been robbed of millions of dollars in the last thirty years by the combinations, pools, control of buying, apportionment of territory, of selling, and other practices of the great packing monopoly. While the bill is intended primarily to help the producers in stabilizing markets and in creating a body before whom they can bring their complaints for quick redress it will likewise benefit the consumers in preventing some of the practices that have made it possible for the products to go down in price without any resulting benefit to the consumer."

Reports are being circulated by the opponents of packer legislation that no attempt will be made to force action on the Gronna bill during this session; but Senator Kenyon says this is erroneous, that every possible effort will be made to secure action upon it in the Senate.

* * *

After a lengthy debate the joint resolution of the House and Senate Agriculture Committees designed to relieve the agricultural situation passed the senate in an amended form and was sent to the House for further action. The resolution directs the Secretary of the Treasury to revive the activities of the War Finance Corporation "with the view of assisting in the financing of the exportation of agricultural and other products to foreign markets."

The second section of the resolution was amended so as to read: "It is the opinion of Congress that the Federal Reserve Board should take such action as may be necessary to permit the member banks of the Federal Reserve system to grant liberal extensions of credit to the farmers of the country upon the security of the agricultural products now held by them, by permitting the rediscounting of such notes of extension at a fair and reasonable rate of interest."

It will be noted that the benefits of the revival of the War Finance Corporation activities are extended to exporters of manufactured products as well as farm products and that the extension of credits is merely suggestive on the part of Congress.

* * *

Several members of the House Committee on Agriculture, of which the chairman, Representative Gilbert N. Haugen, of Iowa, is one, hold to the belief that the resolution should be suggestive rather than directing the Secretary of the Treasury and Federal Reserve Board to act as provided by the resolution. They believe that a better way would be to take the matter up with the Secretary of the Treasury and Governor of the Federal Reserve Board and by co-operation with these officials they would secure more effective results. Mr. Haugen says that the commission appointed to study short time credits will soon take up this work.

* * *

The Senate Agriculture Committee is continuing its hearings daily on proposed agricultural relief legislation. That the government purchase the surplus of certain farm products on hand at the end of the crop year at a guaranteed minimum price was one of the propositions suggested to the committee. It was proposed that a minimum price of $2.25 a bushel be fixed for wheat, $1 a bushel for corn and 75 cents a bushel for oats. A bill authorizing the United States Grain Corporation to borrow $250,000,000 from Federal Reserve banks to put this plan into operation has been introduced in the House of Representative Christopherson of South Dakota. An embargo on imports of grain and grain products and live-stock for one year is proposed in a bill introduced in the House by Representative Young of North Dakota.

* * *

A powerful effort is being made by certain financial interests, including the Farm Mortgage Bankers' Association, to have Congress withdraw the exemption from taxation of farm loan bonds as issued by joint stock land banks. Secretary of the Treasury Houston has joined these interests in opposition to tax exemption of farm loan bonds. He says "loss in revenue to the government by these exemptions runs into many millions annually. The friends of the joint stock land bank system come back with the assertion that this fight against the joint stock land banks is a shrewd move on the part of the mortgage bankers to destroy the entire Federal farm loan system.
—Elmer E. Reynolds.

HARRISBURG LETTER

Legislative Programs.—Certain people in Harrisburg and quite a few in various parts of the state are just now engaged in the biennial pastime of making up a legislative program, altho experience has shown that some lists of legislation to be enacted have been punched full of holes even tho thought out in high places. In a general way there is a Sproul legislative program which calls for advanced legislation and greatly increased appropriations for educational, health and welfare propositions; the continuance of the highway program; the forwarding of agricultural supervision and encouragement and further overhauling of the state government. The Governor would like to have a constitutional convention and certain people would like to have the taxation system remain as it is, while others would like to abolish the State Board of Public Charities and make a state department which would do all the buying for state institutions and regulate state grants for charities on a business basis. The fact that the Governor is not likely to announce his program, tho his message to the Legislature, until the organization is effected and committees named, may be taken as an indication that the legislation is to be well worked out and that the bills will not appear until the political skies are clear. Just now there are reports of squalls, but people here rather look for a fairly comfortable session.

The Constitution.—The Constitutional Revision Commission has prepared a list of 131 amendments to the constitution, of which fifty-four are new and twenty-seven regarded as highly important, the number precluding any chance of a constitutional amendment series such as was carried out in 1909 unless the report of the commission is discarded. The commission has recommended a constitutional convention and the perennial discussion as to whether the time is opportune is waging. The present document is one of limitations and every session there are a score of proposed amendments, but on the other hand there are people who feel that the Constitution has lasted forty-six years and should be permitted to stand until the effects of the great war have rolled away, a policy which was adopted in the late sixties, it might be added.

For Live Statistics.—The State Department of Agriculture will make a new effort to secure a law for assistance from counties on an agricultural census. The state is now dependent upon the federal government for authoritative figures at the very time when the value of statistics is recognized everywhere. Twice, efforts have been made to pass a law providing that when the triennial assessment is made the assessors shall collect for the state certain data, which, when compiled and analyzed, will be returned to county commissioners for their own use, copies being retained at the Capitol. Last session people fell out over who should pay the assessors for this extra work and the state did not have the use of data which would have been of great value the last eighteen months.

Less Fertilizer Fraud.—Study of the reports on fertilizers indicate there is less fraud than for a long time in the sale of mixtures. State inspection, refusal to farmers to buy brands on which they had been hoodwinked and the disposition of buyers to ask questions have brought about this condition, and there are now hopes that with the improvement of quality, prices may come down to some more reasonable figure.

The Vegetable Survey.—Secretary of Agriculture Fred Rasmussen in the course of scrutiny of some preliminary reports on the vegetable survey has reached the conclusion that local chambers of commerce and similar bodies can find much of profit in what the survey party has discovered. There are districts which are in the midst of fertile and well adapted market gardening country which are paying stiff prices for produce from cities which handle the vegetables of other states. The Secretary believes people should study home conditions and work out plans with neighboring farmers. He plans to put the report of the men who have been covering the state into hands of people who will find material upon which to work.

Rural Policing.—A subject which is commencing to crop up and be discussed here is rural policing, especially in the first-class townships. One of the suggestions is for the formation of a force which will be in effect part of the state police system, but the officers will have only their own districts and be paid by their townships. They would have advantage of discipline, equipment and contact with the regular state force.

The Potato Quarantine.—Secretary of Agriculture Rasmussen has issued new quarantine regulations in regard to the potato wart, the zone system being adopted. Five Luzerne county townships, six in Schuylkill and two in Carbon have been quarantined and only wart immune potatoes may be grown therein after March 1, 1922. The secretary has also established quarantines which are absolute on two districts in Cambria, two in Huntingdon, one large one in the rural valley section of Armstrong, and one village in Clearfield.—Hamilton, Harrisburg.

NEW YORK LETTER

Urgent Need of Veterinarian.—At a meeting of the cattle breeders of Onadaga County this week a resolution was unanimously adopted favoring a county veterinarian and a finance committee was appointed to further the good work. Dr. Leonard of Albany, state federal official in charge of the tuberculosis eradication stated that was the only way to secure capable men to give the tuberculin test. This state now ranks third in the number of cattle being tested from which 608 herds were found immune in the October test while Minnesota stood highest with 654 accredited herds and only 256 more animals tested.

Dairymen Loyal.—Regardless of propaganda of all description the pooling plan goes "merrily on" as was shown by the 3000 delegates who attended the annual meeting in Utica last week and unanimously adopted the plan. Proposals to change the contracts were discouraged as a contract with "teeth" is an absolute necessity if the league officials are to make it a success. Six new directors were elected and the demonstration accorded bore evidence of the confidence placed in them and had the organization been stronger there would have been a much less sacrifice in the December drop and in all probability the price would have risen instead of dropping. It is to be hoped that the incoming year will find the pooing plan, plant-building and farm management distribution with the same glowing results or even better than the departing year. Resolutions were passed condemning the importation of butter and other milk products and tariff protection advocated, also restricting the manufacture of "oleo," repeal of the daylight saving law, uniform creamery inspection, bonding of milk dealers for the better protection of the farmer and an advertising campaign suggested, favoring larger consumption of butter and cream, and to insure legislation in favor of the measures the league will co-operate with other large farm organizations at Albany and Washington. The new board of directors will hold their first meeting in New York, Dec. 21, when they will elect officers for 1921, the newly elected director and former counsel of the league, Bradley Fuller, will in all probability be the new president of the board.

New Milk Stations.—The Dairymen's League has taken an option on the 26 supply stations of the Levy Dairy Co., upstate. The League will finance the purchase of the central plant in New York, while the farmers will take care of local stations, which will not impose a burden on farmers as was reported by the conflicting interests. More stations are probable and with Mr. C. A. Weiant, former manager of Borden's, as the new manager of distribution, success is assured.

Separate the School Tax.—At a hearing before a joint legislative committee in Syracuse this week demands were made that educational authorities have sole supervision over all school budgets, also separate the school, from the general tax, so that the taxpayers will know just how much they are shouldering for "educational purposes." There should be no political interference in school finances or management. Suggestions were offered which would require the teacher of the rural school increased efficiencies, so that the child in the country school may have as wide a scope and as great an opportunity for higher education as the city child and to accomplish this it was advocated that the teacher attend a summer school or college once every five years at least, the state to pay one-half of the expense and half pay for teachers during protracted illness where teacher has served ten years or over.—M. F. G.

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WHY PAY $200 AND UP FOR FARM LAND WHEN YOU CAN GET LAND EQUALLY AS GOOD IN A MORE CONGENIAL CLIMATE FOR HALF THE MONEY. Good improvements, roads, schools, etc. Buy direct from owner and eliminate [illegible]. J. F. WOOLF, PIGGOTT, ARK.

YOUNG ABERDEEN Angus bull calved Oct. 2, [illegible]. A grandson of "Jilt 62," the great A[illegible] bull at the head of the Penna. State College herd, and who now weighs 2300 pounds. [illegible] for sale. T. P. SMITH, Falls Creek, R. D. [illegible], Pa.

FARMER WANTED—March 1 1921. Married, sober and honest. References required. Also board extra help. E. K. BREADY, Crescent and Huntingdon Sts., Phila. Pa.

KENTUCKY HOMESPUN smoking and chewing tobacco, 10 lbs., $3; 20 lbs., $5; 100 lbs., $18. PAUL FORD, Agent, JONESBORO, ARKANSAS

Smooth glazed inner wall of Natco Dairy Barn — strictly sanitary

How Does Your Dairy Score?

DOES your dairy get a score to be proud of when the inspector calls at your farm? Do you get those *extra* profits awarded for strictly sanitary milk? You *can* get them if your barn is built right—built with

Natco Hollow Tile

The smooth glazed surface is as easy to keep clean as the household crockery. Germs and vermin find no place to hide; foul odors and filth cannot penetrate. It is easy to produce clean, wholesome milk in Natco Dairy Barns and Milk Houses.

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Ask your building supply dealer to figure with you on buildings of Natco Hollow Tile. Write us for free book of suggestions, "Natco on the Farm."

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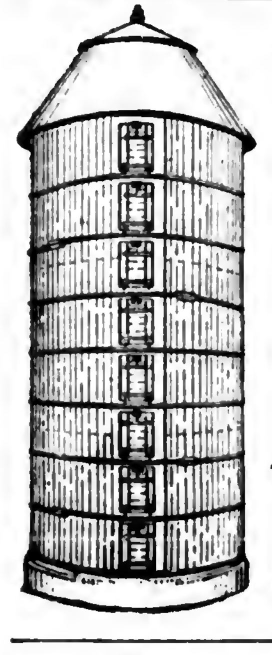

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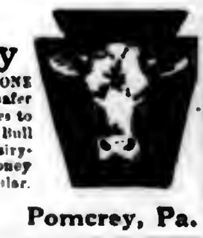

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She has been dehorned with a KEYSTONE DEHORNER, making her gentler, safer and more profitable. This also applies to steers. We make Keystone Dehorners, Bull Staffs, and other appliances for dairymen and cattlemen—all sold on a money back guarantee. Write for circular.

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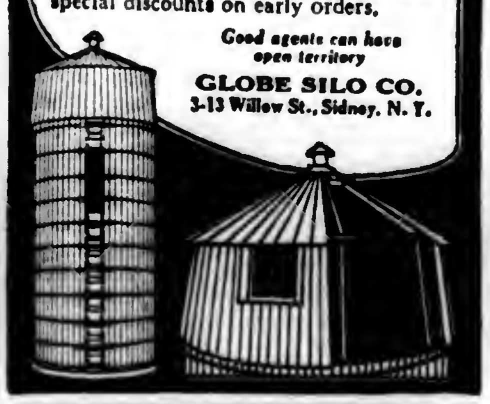

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Thousands in Use giving splendid satisfaction justifies investigating our wonderful offer: a brand new, well made, easy running, easily cleaned, perfect skimming separator only $24.95. Skims warm or cold *milk closely*. Makes thick or thin cream. Different from picture, which illustrates our low priced, large capacity machines. Bowl is a sanitary marvel and embodies all our latest improvements. Our Absolute Guarantee Protects You. Besides wonderfully low prices and generous trial terms, our offer includes our—

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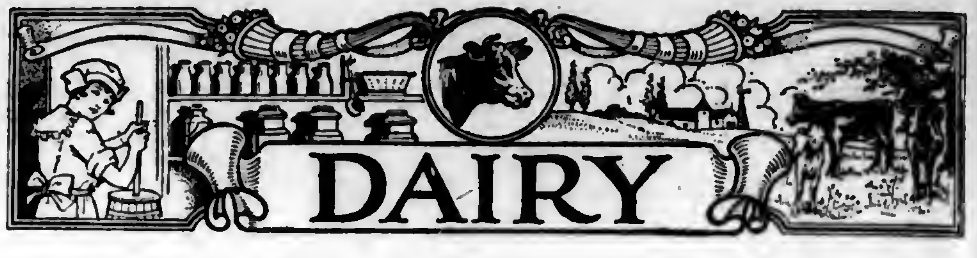


POOLING PLAN ENDORSED AT UTICA MEETING

WHEN nearly 2,000 members of the Dairymens' League and friends endorsed the league's rigid contract for handling sales of milk when they gathered for the annual stockholder's meeting at Utica, N. Y., Dec. 8th, the pooling plan received a big boost. This meeting was for the purpose of formulating plans and instructing directors and officers in the action they should take at the official league meeting which was held in Jersey City, N. J., on December 14.

Perhaps the most important resolution adopted was a unanimous endorsement of the pooling plan. Pres. R. D. Cooper commenting on this question said: "There is but one solution to our problem and but one way to go forward, and that is on the basis of the co-operative pooling plan. The dairy industry and the Dairymen's League are at the crossroads. One way leads forward to more independence and better standards of life for dairymen. The other leads back to the individual way of doing business whereby the farmer does the work and the dealer does the dictating and takes the profit."

With the co-operative plan in operation it will be possible to accomplish much. In the absence of some plan of this kind, the milk which has formerly been going to manufacturers, is finding and will find its way to the fluid milk market with the result that the market will be glutted and demoralized, cows will be sold off, and both producers and consumers will eventually suffer."

Another resolution passed by the league instructed the legislative committee to work for a protective tariff which will cover the difference in cost of labor in producing farm products, and one which will be reciprocal with that on manufactured goods which farmers must buy. The league also urged the following: Formation of local organizations by each of the branches to handle feed and other supplies to be sold by the Grange-League Federation Exchange; the enacting of a law licensing oleo dealers in New York state; the placing of inspection of creameries in the hands of the State Department of Health; a bill to regulate the sale of dairy product substitutes; and a measure requiring buyers of milk to furnish a bond to the state to guarantee payment.

In reviewing the work of the year Secretary Manning stated that the average price for milk of $3.2825 had been one-sixteenth of a cent more than during the previous year but that the cost of production, which according to the Warren formula was $3.685, was $.4025 more than the price received. He also pointed out that of the 89,496 members of the league, 26,833 had forwarded their pooling contracts to the New York office, which is a phenomenally rapid growth when one stops to think about it.

W. J. Kittle, superintendent of the Milk Producers' Co-operative Marketing Company of Chicago, Ill., stirred the audience with an account of the trials undergone by their association during the last two years. Thru a binding contract and a large amount of loyalty and co-operation the producers in the Chicago district finally won their battle. Mr. Kittle said that no farmer in his territory was out a single penny on the pooling plan, and those who had advanced money at the start on note had been paid back 100 per cent on their money. By co-operative selling the Chicago dairymen are finding a market for all their dairy products.

League Directors Selected

Twenty-four districts will be continued for the next year, one man from each district making up the board of directors. New directors were elected from districts 5, 9, 13, 14, 19 and 21. The new list with the district number after each name is as follows: Louis M. Hardin (1), Harry W. Culver (2), J. S. Petteys (3), Harry Bull (4), Chester Young (5), B. M. Kilpatrick (6), J. D. Bearslee (7), R. D. Cooper (8), Kenneth Fee (9), A. F. Spooner (10), L. H. Putnam (11), F. H. Sexauer (12), Bradley Fuller (13), D. F. Putnam (14), H. J. Kershaw (15), N. F. Webb (16), Paul Smith (17), W. U. Richford (18), W. G. Dodge (19), G. S. Pickens (20), A. L. Milks (21), J. D. Miller (22), J. K. Campbell (23), and G. W. Slocum (24).

INTER-STATE MILK PRODUCERS' PROGRAM

For some time there has been a general feeling that the various dairy interests in the Philadelphia Milk Shed should definitely co-operate to advertise the food value of all dairy products and increase the consumption within this district. This matter was presented to a recent conference of manufacturers, distributors and producers and as a result the following program and plan of organization has been developed and the December price schedules of the Inter-State Milk Producers' Association have had incorporated therein an explanatory paragraph, providing for equitable and adequate financial support for such a program.

General Plan

(1) To increase the general consumption of milk and milk products thru various publicity channels. This, more particularly, should be an educational campaign, thru the public schools, health and hygiene organizations, women's clubs, city, county and state organizations, the newspapers and the public in general.

(2) Thru education, to improve the conditions surrounding the production of milk on our farms so that the product will commend itself to the consumer.

(3) In this campaign, milk and milk products, as such, are to be considered, not individual products or brands.

General Organization

The methods of carrying out this program shall be thru a general committee representing the producers, dealers and manufacturers and the public, which shall be duly organized.

Projects

(1) Newspaper advertising, accompanied by wide publicity thru the news columns.

(2) Moving pictures "The Fountain of Youth" has already been approved and will be shown in Philadelphia 250 days this winter and will be availabe thereafter at the service of other towns.

(3) General educational campaign.

(a) in public schools.

(b) thru womens' and consumers' league.

(c) thru Chambers of Commerce.

(d) thru State Agricultural Departments.

(e) thru Agricultural Colleges and Experiment Stations.

(f) thru County Farm Bureaus.

Financing

(1) By the dealers and manufacturers deducting from the amount paid every producers, one cent for each 100 pounds (or one cent for each 46 quarts) of milk actually purchased by them (with a proportionate charge being made for cream).

(2) In addition to this sum the manufacturers or dealers or both, in the various cities, towns or commounities, shall contribute to this publicity fund directly, the amount of one cent per hundred lbs. (or one cent per 46 quarts) for all milk purchased.

The moneys so contributed from producers, dealers and manufacturers, shall be turned over to the Allied Publicity Committee and be expended in equitabe amounts for the benefits of such towns, cities and communities contributing.

Headquarters and General Business

The headquarters of the publicity committee and its executive offices shall be in Philadelphia, Pa. Meetings of the committee shall be at the call of the chairman.

The committee shall hold monthly meetings, when reports of the executive officers, including the treasurer, shall be made and general business plans considered.

Special and Local Committees

Special and local committees may be special projects or to co-operate with the general committee in various cities and districts.

Everybody Must Co-operate

This is the biggest opportunity ever presented to the industry in this territory. It involves the complete absorbtion of the milk supply in the Philadelphia milk shed. Don't fail to note—

(1) That this money will be contributed equally by producer and dealer or manufacturer and in proportion to amount of milk produced and purchased.

(2) That every interest in, and every section of, the Philadelphia Milk Shed will serve to make individual advertising more effective.

(3) That such a program will command the support of the various educational and humanitarian interests of the cities and states because it will be recognized to be along such broad lines that they can and will gladly co-operate very fully.

In accordance with a resolution passed at the annual meeting of the Inter-State Milk Producers' Association, Dec. 6th, 1920, and printed in the report of that meeting this plan becomes effective at once.

You will note that the receiving station price on the December schedule of the Inter-State Producers' Association is quoted 1c per 100 lbs. below the actual calculated price based on the arranged price per quart f. o. b. Philadelphia. For instance, in the 50-60 mile zone the price for 3 per cent milk would be $2.69 per 100 lbs. based on 8 cents f. o. b. Philadelphia for 4 per cent milk while the price quoted is $2.68.

These funds have no connection with the commission due the Inter-State Milk Producers' Association from its members, which is to be deducted and forwarded to that office in the usual manner.

The Philadelphia "direct shipped" schedule of the Inter-State Milk Producers' Association does not have this deduction made thereon, and buyers will have to deduct 1 per cent per 46 quart can, in making payment for the same and turn the amount so deducted over to the treasurer of the Publicity Campaign Committee.

Ullra May Queen, 62690, 3½ Years

MILK FOR SCHOOL CHILDREN

The National Dairy Council reports that the Board of City Commissioners of Chattanooga has begun the serving of milk in every school in their city. The Council is supplying posters dealing with the food value of milk to all the schools, so that the children may learn the real truths about milk.

The National Dairy Council states that Chattanooga is to their knowledge the first city to supply milk to every child attending school, regardless of their inability to pay.

The Parent Teachers' Association has assumed the responsibility of carrying on the work. They know the wonderful results which will follow.

Return of Reason

The signaling of Mars and the attempt to reach the moon by means of a projectile have evidently been postponed, probably because of a sudden return to reason.—Albany Journal.

Common sense in feeding

TI-O-GA Feed Service makes common-sense application of the very best scientific feeding principles.

Science has determined the requirements of cows for maintenance and milk production, and the daily ration must contain the required amount of *Digestible* Protein and *Digestible* Heat and Energy Food.

The ration consists of roughage and concentrates, and a *Balanced Ration* requires the proportioning of nutrients in both, to furnish the exact requirement in Protein and Heat and Energy Food. The proper proportioning is imperative, for Heat and Energy Food is just as important as Protein; an excess of either is waste and results in loss; a deficiency causes decreased production.

Roughage grown on the farm varies in nutritive content and the feeding problem is to supplement the roughage with concentrates, so proportioned as to meet the requirement of the cow. This is accomplished by

TI-O-GA FEED SERVICE

in classifying the roughage according to nutritive content into three classes and preparing a feed to use with each class which will in every case furnish the cow with the same nourishment properly proportioned.

Red Brand TI-O-GA Dairy Feed
to be fed with low protein succulent roughage: Silage, Pasturage, Green Fodder, etc.

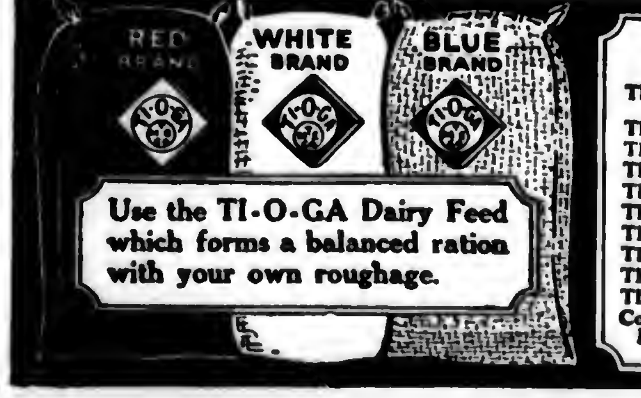
White Brand TI-O-GA Dairy Feed
to be fed with medium protein dry roughage: Timothy Hay, Mixed Hay, Corn Fodder, etc.

Blue Brand TI-O-GA Dairy Feed
to be fed with high protein dry roughage: Clover Hay, Alfalfa, etc.

In each case, you buy only the nutritive elements needed to furnish what is lacking in that which is home grown, and when fed as intended, each combination furnishes the cow with the same amount of nutrition.

On request we will furnish without charge, booklet on *TI-O-GA Feed Service* and fuller explanation of how the three feeds give the same results. If you want to take advantage of *TI-O-GA Feed Service* be sure your dealer furnishes the TI-O-GA Dairy Feed that should be used with the roughage you have. If he doesn't have it, advise us and we will see that you are supplied.

Tioga Mill & Elevator Co.
Waverly, N. Y.



Use the TI-O-GA Dairy Feed which forms a balanced ration with your own roughage.

The same careful service is furnished through:
TI-O-GA Brood Sow and Pig Feed.
TI-O-GA Growing Shoat Feed.
TI-O-GA Fattening Hog Feed.
TI-O-GA Chick Feed.
TI-O-GA Growing Mash.
TI-O-GA Growing Grains.
TI-O-GA Laying Food.
TI-O-GA Poultry Grains.
TI-O-GA Calf Food.
TI-O-GA Horse Feed.
Colonel's Ration (Full Feed for Horses).

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HORTICULTURE

NEW JERSEY HORTICULTURAL SOCIETY MEETS

WHAT can New Jersey display when at her best? In the exhibits of fruit and vegetables which marked the recent annual meeting of the Horticultural Society of that state lies the answer. Four large display rooms of the Chalfonte Hotel, Atlantic City, where the exhibit was held, were turned over to a collection of apples, corn, sweet and white potatoes, pumpkins, squash, beets, green vegetables, such as has rarely been seen in the state.

There were 500 entries altogether, and 31 commercial exhibits. Premiums went to growers from Warren County to Cape May, and from Sussex to Atlantic. Practically 600 members and guests attended the sessions which were held in the new aditorium of Haddon Hall, finished for the occasion.

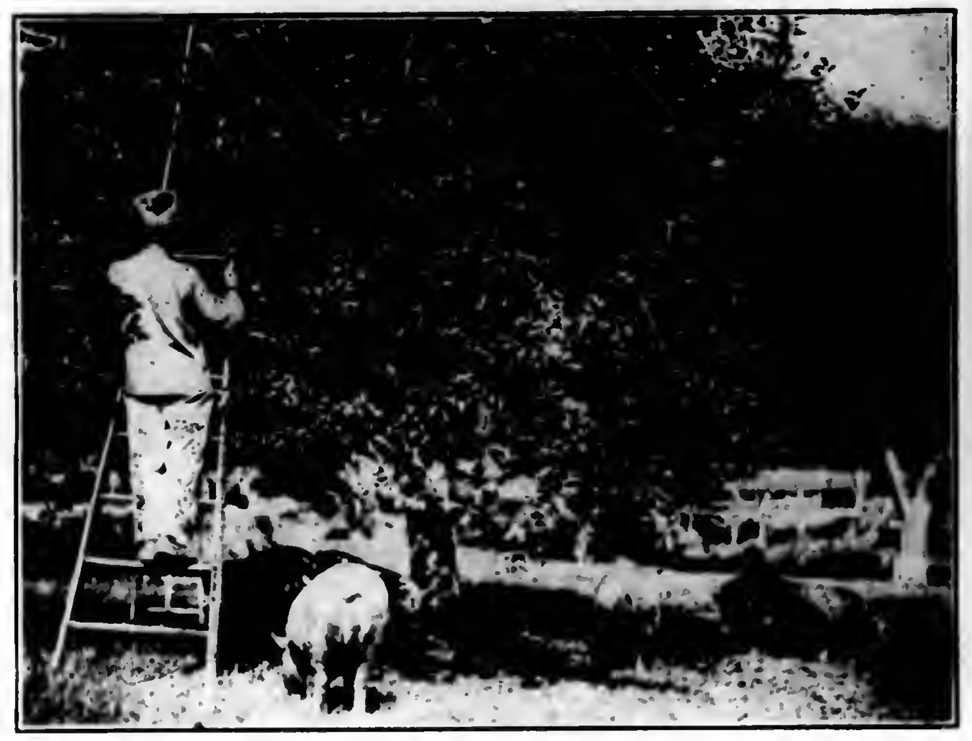
Roadside markets and other distribution experiences emphasized the following points: that roadside markets are a profitable way of disposing of at least part of the products, but that the fruit and vegetables put on display must be of good quality, well arranged and well advertised. Most important of all, customers must be able to get what they want whether it be cheap bruised fruit, or perfect more expensive specimens. One farmer sells four grades of Elberta peacehs with prices in accordance, but he emphasized the importance of "selling Ben Davis as Ben Davis." There are from 150 to 175 of these markets along the shore road in Cape May County alone, all doing a good business, one grower on his best day selling $300 to $400 worth of produce. One big point in favor of this kind of selling is that tender ripe fruit can be disposed of at roadside markets.

In speaking of his distribution experiences Hon. Emmor Roberts, of Moorestown, blames the high price of sugar and glutted markets to railroad strikes and suggested more cooperation with railroads.

John F. Deegan, sales manager of the North American Fruit Exchange, suggested co-operative marketing as the solution of the problem explaining its efficiency in the far West which is thus able to market boxed apples even with the added expense of freighting in sharp competition with those of local markets. The reluctance with which New York and New Jersey have taken it up can be attributed to the proximity of large marketing centers.

President M. A. Blake in his address at the evening meeting, emphasized particularly the need for a program of work, and "organized effort" which is the slogan of the times.

One of the mose entertaining talks of the meeting was given by Horace Roberts, of Moorestown, at the Monday evening meeting, on a trip which he took to Europe last summer. He found fruit a high, scarce, and poor commodity, and only in Alsace-Lorraine where German efficiency had been turned into constructive channels had there been signs of scientific farming. Battlefields, according to him are not hurt for farming, one can only recognize them by the heaps of barbed wire.



Hogs Help to Utilize Waste Apples and Also Destroy Pests

HOGS CONSUME SURPLUS APPLES

With apples going to waste for want of a market price which would cover the cost of production, farmers have been quick to make use of the surplus in any way possible. The accompanying photograph shows the hogs following the pickers from tree to tree, greedily eating up the apples as the picker shakes them from the branches. It is surprising the amount of apples which a 250-pound hog can consume, and it is doubtful if apples are worth as much in the form of pork as they would be in the form of cider. However, they certainly are worth more than in the form of fertilizer.

Even in seasons of good prices for apples, it is a custom with some of the Hudson River valley apple growers to have a small drove of hogs follow them thru the orchards at harvest time. The hogs clean up the ground, and dispose of the fruit which drops from the trees as the market stock is gathered. The protection in winter, the green grass of early spring, the shade of summer and the drop fruit of fall go toward making hogs in the apple orchard a happy farm combination.—H. T. B.

The Popular Silos

Why does the sale of Tecktonius and Darby Silos more than double each succeeding year?

Because each silo is an indisputble testimonial as to its perfection in construction and high grade material used.

Ask us for list of purchasers in your county and satisfy yourself by personal inspection.

Early buyers' discounts are now in effect. Prices on both Tecktonius and Darby Silos are now lower than they will be at any time during the coming season.

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Every "Red Seal" he sells is guaranteed. Ask dealer also for engine owners' handbook, free to users of Red Seal Batteries.
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Farms

115 Acres, $5,500 With Horses, 10 Cattle, Pigs
Big flock poultry, harnesses, vehicles, full implements, hay, grain, potatoes, vegetables, etc.; on main road, near city; 60 acres high cultivation; 25-cow wire-fenced pasture, estimated 500 cords wood, large quantity timber, sawmill nearby; 20 apple trees; warm 9-room house, 2 good barns, silo, poultry house, etc.; retiring owner's price only $5500; easy terms. Details this and 25 acre equipped farm, only $1000 down, page 39 Strout's Illustrated Catalog Bargains 33 States, FREE. STROUT FARM AGENCY, 1422 BE, Land Title Bldg., Philadelphia, Pa.

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World's best markets nearby. Enjoy prosperity under ideal living conditions. Write Land Registry, State House, Trenton, N. J.

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HAY Ship to The Old Reliable House DANIEL McCAFFREY'S SONS 623-25 Wabash Bdg., Pittsburgh, Pa.

THE APPLE MARKET SITUATION

(Continued from Page 1).

tant savings as a result of collective buying of supplies and collective sale of products; assistance when necessary in properly financing the production and marketing activities; and the employment of efficient business and sales management.

Any community desiring to form a co-operative organization for the more efficient marketing of its products, moreover, can get assistance and advise from specialists employed for this purpose, without expense, by making proper application to the Bureau of Markets, Dept. of Agriculture, Washington, D. C. Incidentally, many a pitfall may be avoided by availing oneself of this service.

Effect on Value of Orchard Property

It will be interesting to note the effect of the present slump in fruit values, on the prices at which good orchards may be bought. Thus far it seems that no appreciable revision in prices of the orchards as a whole have been made as yet, excepting possibly in the case of forced sales which are never a true criterion, but the actual sales of orchards have been greatly slowed up. This is doubtless partly due to the season of the year, which is always the off-season for such transactions, altho in many respects it should be the best one in which to buy. This also should be especially true this year, as any owner is more likely to consider parting with his property just at the close of a rather unsatisfactory season than he is in the following spring when the glow and promise of a new set of blossoms are before him. The sales offer that have recently come to our attention, moreover, evidently bear this impression out.

We would not attempt to offer advice on a matter of this kin, but on the generally accepted business principle that the best time to enter the market on anything is when everything looks the bluest, any one interested in becoming a fruit-grower could hardly find a better time to begin his search for a desirable property than right at the present time. We hesitate to make any suggestions that may even seem to carry a real estate flavor, but unless the entire country is going to the dogs—and especially the entire agricultural portion of it—we may simply say that we have not seen a better time in the last half-dozen years for one to get started right on the possession of a good productive orchard, if he will use good judgment and keep his eyes open. And until nursery stock and other important development costs make very material reductions from present levels, the orchard already in bearing, or on the point of bearing, is undoubtedly the best point at which to enter the fruit-growing industry.

The present apparent setbacks are undoubtedly only temporary, and as a matter of fact, it is usually the case that good years are to be expected immediately following bad. It may be necessary to make some important improvements in our marketing systems before the full measure of profit will reach the real producer of the goods, but this can be accomplished without any special difficulty, and we may take some comfort in the fact that the fruit-grower's lot even now will compare very well with that of most other lines of agriculture.

How about yourself? Are you a doer? Or are you a 'some day' man?

When prices are low get more off the acre

Greater yield per acre assures lower cost of production and is an effective way of combating lower price per bushel. That is why the farmers of the Old World are often so successful in competing with those of the New in the production of staples.

Greater yield means an understanding of soil conditions and crop requirements. It means a careful selection of fertilizers with reference to their composition, their availability and their peculiar fitness for the crops intended. Properly balanced fertilizer starts the plant off quickly, helps to resist disease and furnishes a constant supply of plant food during the growing and fruiting season.

"Double-A C" Fertilizers, under whatever name or brand you may know them, are based on a thorough knowledge of the agricultural conditions in every locality in which they are sold. Tell us your plans and problems, and we'll suggest what fertilizers you need for your particular soils and the crops you want to raise. At the same time ask for booklet "How to Get the Most out of Fertilizers".

Write for the "Double-A C" agency if we're not already represented in your locality.

The American Agricultural Chemical Company
Address nearest office
Atlanta Boston Baltimore Buffalo Cincinnati Cleveland Charleston Columbia Detroit Jacksonville Los Angeles Montgomery New York Philadelphia Rutland, Vt. St. Louis Savannah, Etc.

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Cuts Down Trees—Saws Logs By Power
Patent Applied For

Cuts Down Trees Level with Ground Leaving No Stump.

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100 times brighter than kerosene lamps. Burns 96% air and 4% common gasoline. Lamps and Lanterns for every purpose. Clean—odorless—economical.
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New patented two mantle burner lights with One Match easily and quickly. Greatest improvement of the age.
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REAL COMFORT FOR EVERY HOME
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FOR HAND KNITTING. SOLD ONLY DIRECT FROM THE MILL TO YOU!
50c a skein—4 skeins, approx. 1 lb., $2.00.
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SEND TO-DAY FOR FREE SAMPLES
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206 MAIN ST., EATON RAPIDS, MICH.
ESTABLISHED 44 YEARS

TELL the advertiser you saw adv. in Pennsylvania Farmer.

MUSIC HELPS MAKE FARM LIFE ATTRACTIVE

Utilizing the Piano and Phonograph to Teach Good Music

THE FACT that so many young men and women are leaving the country for the city is causing much anxiety. The remedy is said to be, "Make country life more attractive." Thru music, as thru no other medium, is it possible to bring contentment and happiness. It should be made possible for the children in rural schools (and, perhaps, for adults in rural communities also) to receive class instruction on orchestral and band instruments.

"I have in mind a rural school in Pennsylvania where this plan is being followed," said the State Supervisor of Music for Pennsylvania. "A competent man is employed to teach instrumental music. He gives both class and individual instruction. The school has three orchestras, of which the first and most proficient is the smallest. It comprises eight members. The second consists of fourteen players. On special occasions these pupils are coached to unite with the first orchestra. The third is the beginners' orchestra. It is elementary in character. It numbers from six to twelve players.

"The school also has a mandolin club of nine members.

"There is a capable teacher of piano. The piano is placed in a small room adjacent to the main schoolroom. Thru an admirable arrangement, pupils leave the schoolroom at any time for a piano lesson. The schedule is working smoothly. Students in the main room hear the tones of the piano all day. They are no more distracted by it than are their city cousins by the jangling gongs of passing trolley cars."

Admiring His First Christmas Tree

HOW BILLY PLAYED SANTA CLAUS

It was Christmas eve and past Billy's regular bed time, but he lingered before the sitting-room fire, talking with Mother about Santa Claus and the many visits that he would have to make. Mother said that Billy had been a good boy so Santa Claus would surely bring him his new train. "I hope he got my letter," said Billy as he thought of the happiness that Christmas would bring him. Then he began to think about his little friends Tom and Louise, and he felt troubled about them, for they both had said that Santa Claus could not come to them this year. They were his little neighbors and playmates; he liked them and he knew that they, too, had been good.

Billy sat thinking for a few minutes, then he jumped up and ran to his room and took his little bank from the top bureau drawer and shook out his savings. He had $2.50 and he slipped it into his pocket, hurriedly put on his overcoat and mittens, and, cap in hand, ran back to the dining-room. "Mother," he said, "let's play Santa Claus! Let's go to the big top shop and buy a present for Tom and one for Louise. I have some money of my own to spend!" Mother was surprised at his plan, but she was glad to join in the fun, so together they were soon hurrying down the street to the big toy shop. There Billy bought a beautiful doll for Louise and a toy automobile for Tom. On one package he wrote, "To Louise From Santa Claus," and on the other, "To Tom From Santa Claus."

How happy Billy and Mother felt as they went along the street to Louise's home. There was a light in the kitchen and they could see Louise's mother working there, so while Mother waited outside, Billy slipped quietly in by the front door. From the sitting-room mantle hung Louise's empty stocking! Billy put the new doll in the top of it and in his hurry to get out before he was discovered, he tipped over a chair! "Is that you, Louise?" called her mother. But Billy was soon safely outside of the house and heard no more.

Then Billy rejoined Mother and they went around the corner to Tom's home—the tiniest cottage in the neighborhood. As he did not care to risk being discovered at Tom's, he did not attempt to enter, but slipped quietly around the cottage to Tom's bed-room window. It was open! Billy was just about to climb in when Tom's dog barked and somebody stirred in bed, so Billy put the toy on the chair near the window and ran back to Mother who was waiting on the corner.

When they reached their own home they found that Father had finished trimming the beautiful Christmas tree. They all admired it, each one put on a few finishing touches and then Billy hung up his stocking and went upstairs to bed. Mother came and tucked him in snugly for the night and, fancying that he could hear the jingle of bells and the beat of tiny reindeer hoofs, he soon fell asleep.

When he awoke in the morning he found Mother bending over him. "Billy," she said, "I have thought of a Christmas plan almost as nice as yours. How would you like to have our Christmas tree this afternoon and invite Tom and Louise?"

Billy clapped his hands and shouted "I would love to invite them, Mother, and may I be Santa Clause?"

In the afternoon Billy's friends arrived to enjoy his Christmas tree. What happy faces they had! What merry laughter was heard! And no one was happier than Billy, who, dressed like Santa Claus, handed out the gifts.—By Sara McCulloch.

A WEDDING GOWN FOR FOUR GENERATIONS

I AM in luck, not from any virtue of my own, but from what heredity wished onto me. It does not take me long to tell what I cherish most. It is an old dress. For years it was the only occupant of a large unused trunk. But it used to worry me so, for fear if the house should get on fire, I could not get to it in time to save it, that I finally put it in a box where it was handy to my room. Now I figure that I can save my life and the dress, too. Our household goods are insured, but no money in the world could measure my estimate of this dress. It was my wedding dress. It was also the wedding dress of my grandmother and of my great-grandmother.

January 8, 1800, my great-grandmother wore it when she was married. It was a pearl-colored changeabel silk. It is still a pearl-colored changeable silk, of great beauty and still with enduring substance.

March 28, 1838, my grandmother wore the same dress with absolutely no alteration for her wedding gown. And June 11, 1904, I was married in the same dress with no alteration. And just recently I had my picture taken in it, just as you see me here in this photo, and the dress is exactly as my great grandmother wore it the first time. It is in almost perfect state of preservation, despite its 120 years. Do you think there is any modern silk or modern fabric of any kind that can make such a record? I think not. Certainly not the kinds of silks and woolens we have been charged great prices for the past three or four years.

When the marrying minister congratulated me when I was married in this gown, he said his one wish was that I might have a daughter to be married in the dress.

Therefore if all the other treasured things in the house were in danger of fire, you can easily understand why I would give the last of my strength to preserve this gown. Most wedding gowns of 1800, and even of 1900, have gone the way of all the world. That this one has been preserved testifies not only to the purity of the strands that went into its weaving, but also to the thrift and sentiment that has cherished it thru all these years. And I trust that it may yet grace more than one bride in years to come.—Mrs. Cora June Sheppard, Cumberland Co., New Jersey.

Mrs. Sheppard's Wedding Gown

FOR APPLES THAT ARE NOT KEEPING

Few are the homes in village and country which do not have a good supply of apples in the cellar this year. In some cases these are not keeping very well, no doubt because the apples were bruised before storing. These bruised apples and, in fact, any apples which are not needed for other purposes may be converted into apple butter, a delicacy which is good the year 'round, say the workers in home economics at the State College at Ithaca, who give these directions for making it:

Thoroly wash the apples and remove any decayed or discolored spots. Core and slice the fruit, and to each gallon of sliced apples add 3 quarts of sweet cider. Place the apples and cider in a large preserving kettle and cook until tender. Pass them thru a sieve, and to each gallon of apples add 1 lb. brown sugar and 1 teaspoonful each of ground cloves, allspice and cinnamon. Cook until very thick.

Making good apple butter depends on long slow cooking and frequent stirring.

The finished apple butter should be put into sterilized glass or stone jars and either sealed or covered with paraffin.

Apple butter is a wholesome spread for the children's luncheon sandwiches, and is equally relished by grownups, either as a spread, a cake filling or a relish.

SUNDAY IN SPAIN

Two students from Baltimore recently made a trip to Europe as deck hands. Their comments on Sunday observance are interesting at this time when a more liberal Sunday is being urged in this country:

Sunday in Spain is the red-letter day of the week in more ways than one, according to Basford. Sunday morning presents a hustling scene in the main streets. The thorofares are crowded with people, many of them women returning from church, with prayer-book in one hand and market basket in the other. The stores and markets do a rushing business, and everybody seems to stop to purchase his Sunday dinner on the way home from church.

Sunday afternoon is devoted to bull fights and other diversions.

"Barcelona has two arenas, one old and one modern," Basford said. "We were told that the fight at the old one was much the better; by better was meant 'more bloody.' Incidentally, a large part of the audience at the fight was composed of women. I do not know what class of society they represented, for it seems that in Spain every one goes to the bull fights. During the fight six bulls and 12 horses were killed. It's good sport to see the matadors escape the horns of the bull, but it's grewsome to see harmless horses, blind-folded and made a target for the horns of a maddened bull. Even when a horse has been downed by a bull, it is jerked to its feet again, often with its body torn, and made to gallop around the arena."

RURAL EDUCATION

It seems to me that one of the great wrongs that should be righted in this fair country is this of unequal educational opportunities between those of the rural and city districts. Take my own county, for instance, in which I am told there are about 10,000 school children, 5,000 of these children live within the limits of the small towns and boroughs and have access to some kind of high school instruction while the other 5,000 children who live out in the country on the farms have nothing offered them but the one room school with its five grades. Is it any wonder that rural children leave the farm for the city as soon as they are old enough to earn their own way. Here in my county we have 5,000 boys and girls as good, and active, and strong, and sweet as God can make them filled with all of the latent powers and possibilities of the other 5,000 who live in the towns and boroughs yet they are denied the inspirational touch of good well-trained, efficient teachers and modern equipment that goes toward making a healthy environment in which they might live. This better equipment, better teaching force, and better inspirational environment cannot be secured in the small one room school. It seems possible thru centralization. Why not try the experiment?—V. Ross Nicodemus.

HOMESPUN YARN

Jack and Jill went up the hill,
  With light and lively step,
A balanced breakfast gave them
    speed,
  And health and strength and pep.

* * *

Don't give Christmas presents because you must. Such a gift has nothing of the Christmas spirit.

* * *

The simplest way to make sure your body is getting the foods it needs is to use plenty of milk.

A dish drainer not only saves time and labor but it does away with the too-often-insanitary dish towel.

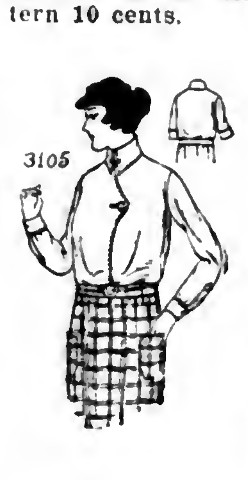
* * *

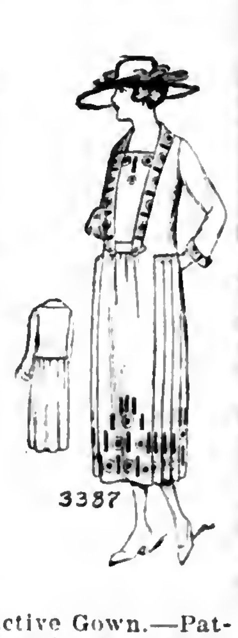
At butchering time you may like to have a copy of "The Curing of Meat Products," New York College of Agriculture, Ithaca, N. Y., will send you a copy if you ask for Bulletin F-119.

PENNSYLVANIA FARMER PATTERNS

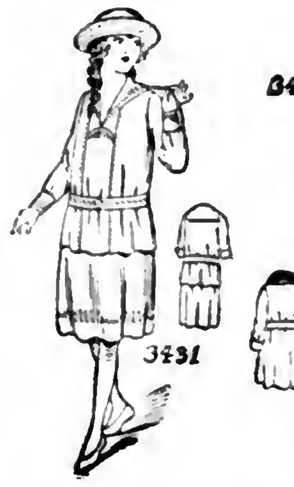
Give figures and letters of each pattern exactly as printed at beginning of each description or we will not be responsible for correct filling of orders. Give bust measure when ordering waist patterns, waist measure for skirt, and age for children's patterns. Address Pennsylvania Farmer, 261 S. Third Street, Philadelphia, Pa.

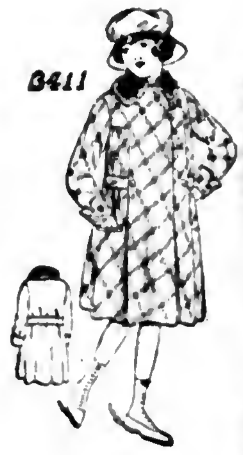
3105.—Smart Shirt Waist.—Pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 will require 3 yards of 27-inch material. Linen, madras, crepe, satin, silk, flannel and moire, are good for this style. The sleeve may be in wrist or elbow length. Pattern 10 cents.





3387.—An Attractive Gown.—Pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 37-inch size will require 6 yards of 40-inch material. Braid satin or velvet appleque embroidery or passementerie may serve as trimming for this design, with serge, velvet, satin or silk, gabardine or tricotine for the material. Pattern, 10 cents.





3431.—A Very Attractive School Dress.—Pattern is cut in 4 sizes: 8, 10, 12 and 14 years. A 10-year size will require 4¾ yards of 27-inch material. The blouse closes at left side in front. Blue serge braided with fine soutache was used to make this attractive style. Pattern, 10 cents.

3411.—A Comfortable Coat Style.—Pattern is cut in 5 sizes: 6, 8, 10, 12 and 14 years. A 10-year size will require 3¼ yards of 44-inch material. Heather mixtures, pile fabrics, tweed, twill, serge, broadcloth, velours and polo cloth are attractive for this model. Pattern, 10 cents.

Here's a suggestion for Christmas gifts the children can make: Tin containers, such as baking powder or coffee cans, make attractive boxes for holding the staple dry groceries. Paint the cans any soft color desired, preferably to match walls or woodwork in kitchen. The labels may be stencilled on in white or in a contrasting color.

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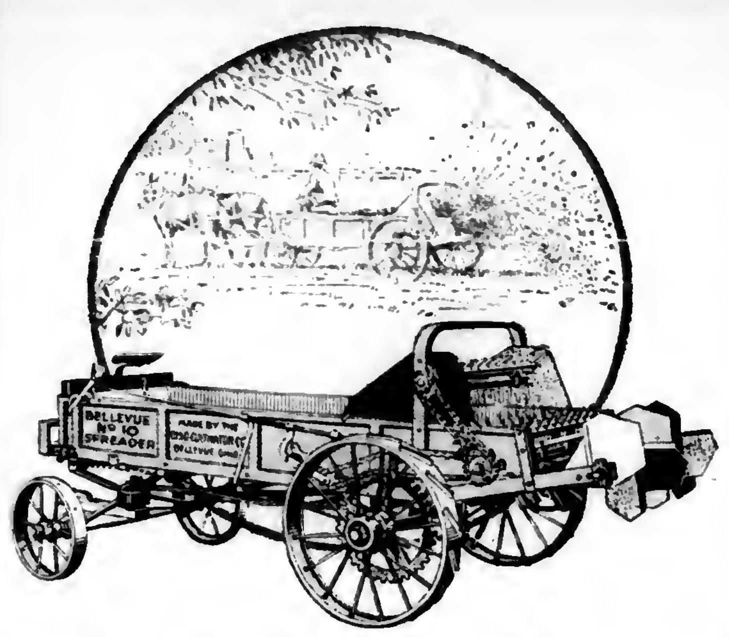

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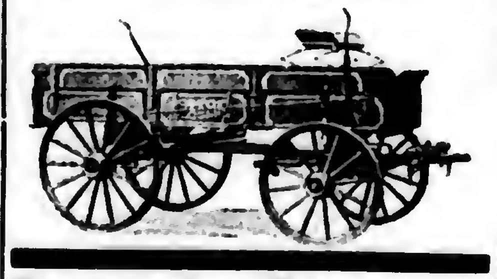

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POULTRY

REPORT OF PENNSYLVANIA POULTRY FLOCKS

ABOUT half of the one hundred and seventy farms that are keeping egg and feed records of their poultry, sent in their accounts before the 10th of December, and are included in this summary.

A flock of White Leghorn hens, owned by John Toivonen, Erie County, were winners in egg production for the month, with an average yield of 11.7 eggs per hen. Second honors went to a flock of Barred Rocks, owned by Mrs. R. A. McCorkle, of Chester County, their average being 8.1 eggs per hen.

Keeping Poultry Accounts

A record of the expenses and profits of the farm poultry flock can be kept without an undue amount of time and trouble, if the work is definitely planned the beginning of the year. Probably an account of the amount of feed consumed is the most troublesome to obtain. The easier way to handle this is to have two boxes or bins of known capacity, large enough to hold about the amount of grain and mash that the flock will consume per month. Whenever these boxes are filled, charge the amount of grain to the feed account.

In order to avoid complications in figuring the average number of hens on the farm for each month, the number on hand at the first of the month is taken as the average number for the month. For this reason when hens are to be sold, they should be disposed of as nearly as possible during the last week of the month, so that the flock average will not be seriously disturbed.

The most common questions sent in this month were pertaining to birds affected with colds and bleeding combs. Fall colds are forerunners to roup. The best prevention of colds is lots of fresh air and a clean, dry house. Have the birds roost back from the windows out of the drafts, and leave the muslin curtains open most of the time, only closing them on severely cold nights, or when the snow or rain beats in. Give the flock Epsom salts, plenty of green feed and exercise. Clean the drinking dishes daily, occasionally disinfecting them, and give good, clean, wholesome food. Isolate any birds showing any signs of sickness, and if a bird becomes very sick, kill and burn her rather than to try individual treatment. Give Epsom salts once a month during the winter months, at the rate of one pound per hundred hens, either in the drinking water or a moist mash.

When hens or pullets are starting to lay during the fall and winter months a slight scratch on the comb will cause a great loss of blood. If the flow is not stopped the fowl will often bleed to death. An effective method to check the bleeding is to sear the torn section with a hot iron, or to cover it with collodian or "new skin." Remove all loose ends of poultry wire, protruding nails, or sharp pieces of tin with which the combs might come in contact.

Every one is interested in more eggs at this season of the year. The poultry flock which is expected to lay winter eggs must have inherited ability to lay which can only be obtained by hatching from high producing hens, mated with good, vigorous cockerels. They must be housed in a clean, dry house, with plenty of fresh air and sunlight. Most important of all they must be fed a ration which furnishes the proper material for making the eggs. The easiest method of feeding laying hens is by the use of a dry mash. There is probably no one best egg producing mash but one thing is certain, it must contain meat scrap. The following dry mash has been found to be very satisfactory, and if fed in combination with the common grains that are produced on the farm, will produce results:

100 lbs. corn meal
100 lbs. wheat middlings
100 lbs. wheat bran
100 lbs. ground oats
100 lbs. beef scraps or high grade digester tankage.

At this season of the year, hens should be eating two-thirds as much mash by weight as they do scratch grain, or roughly speaking, about equal parts in bulk.

Ten Highest Records for November

Flock Owner.	County.	Variety.	No. hens	Av. No. Eggs per hen
John Toivonen	Erie	W. Leghorns	286	11.7
Mrs. R. A. McCorkle	Chester	Barred Rocks	55	8.1
M. C. Potter	Juniata	W. Leghorns	31	8.0
Myra Van Fleet	Bradford	W. Leghorns	30	6.8
Grace E. Ruckle	Columbia	W. Wyandottes	50	6.6
Jacob D. Shreck	Union	W. Leghorns	822	6.3
J. B. Ruckle	Columbia	W. Leghorns	412	5.6
Henry W. Topley	Montgomery	Mixed	264	5.4
A. P. Naylor	Juniata	Mixed	178	5.2
Charles Trump	Lebanon	Barred Rocks	200	5.1

Highest Record for Each Variety for November

Variety.	Flock Owner.	County.	No. hens.	Av. No. Eggs per hen
W. Leghorns	John Toivonen	Erie	286	11.7
Barred Rocks	Mrs. McCorkle	Chester	55	8.1
W. Wyandottes	Grace Ruckle	Columbia	50	6.6
Mixed	H. W. Topley	Montgomery	264	5.4
R. I. Reds	J. T. McKenzie	Columbia	111	4.8
Brown Leghorns	Mrs. H. Carner	Centre	95	4.6

A GREAT UTILITY SHOW

At the Northern New York Poultry show was staged the largest and best exhibit of utility birds ever shown. Upwards of five hundred were exhibited. Prof. Hurd of the extension service bureau of Cornell University, filled the office of judge. He was loud in praise of the show and of the opportunity we have in developing this line of work.

PASSING EVENTS IN PICTURES

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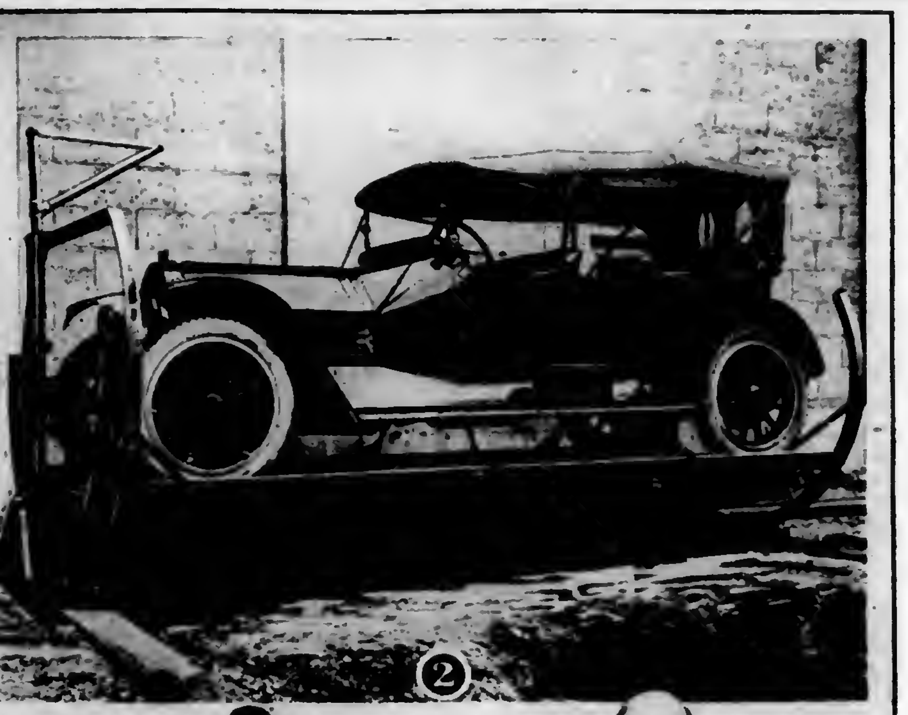
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(Photo. Copyright by Underwood & Underwood.)

1—Dempsey "signing up." From left to right Jack Dempsey, George Carpentier and Charles S. Cochran, British Promoter.
2—The "Turn Auto" Gives More Opportunity to Properly Repair.
3—Frau Yella Hertzga of Vienna, Austria, Who Has Appealed to the American Red Cross for Funds for Her Country People.
4—President-elect Harding and a Prize Winning Holstein, at the Minnesota State Fair.
5—Native Borneo Inhabitants. Note the improvised cradle.
6—William Jennings Bryan ready for "business."
7—Coast Defense Gun, Firing at Moving Target Six Miles Away.
8—An Indian Girl, Who Like Our American Girls, Visits the "Beauty Doctor."
9—Preparation of Pattern for Relief Map
10—Armenian Girl as She Fought the Turks.

The Voice of the Pack

by Edison Marshall

CHAPTER III

Dan didn't see his host at first. For the first instant he was entirely engrossed by a surging sense of disappointment—a feeling that he had been tricked and had only come to another city after all. He got down on to the gravel of the station yard, and out on the gray street pavement he heard the clang of a trolley car. Trolley cars didn't fit into his picture of the west at all. Many automobiles were parked just beside the station, some of them foreign cars of expensive makes, such as he supposed would be wholly unknown on the frontier. A man in golf clothes brushed his arm.

It wasn't a large city; but there was certainly lack of any suggestion of the frontier. But there were a number of things Dan Failing did not know about the west. One of the most important of them was the curious way in which wildernesses and busy cities are sometimes mixed up indiscriminately together, and how one can step out of a modern country club to hear the coyotes wailing on the hills. He really had no right to feel disappointed. He had simply come to the real west—that bewildering land in which Tomorrow and Yesterday sit right next to each other, with no Today between. The cities, often built on the dreams of the future, sometimes are modern to such a point that they give many a sophisticated eastern man a decided shock. But quite often this quality extends to the corporation limits and not a step further. Then, likely as not, they drop sheer off, as over a precipice, into the utter wilderness of the Past.

Dan looked up to the hills, and felt better. He couldn't see them plainly. The faint smoke of a distant forest fire half obscured them. Yet he saw fold on fold of ridges of a rather peculiar blue in color, and even his untrained eyes could see that they were clothed in forests of evergreen. It is a strange thing about evergreen forests that they never, even when one is close to them, appear to be really green. To a distant eye, they range all the way from lavender to pale sort of blue for which no name has ever been invented. Just before dark, when, as all mountaineers know, the sky turns green, the forests are simply curious, dusky shadows. The pines are are always dark. Perhaps, after all, they are simply the symbol of the wilderness—eternal, silent, and in a vague way rather dark and sad. No one who really knows the mountains can completely get away from their tone of sadness. Over the heads of the green hills Dan could see a few green peaks; McLaughlin, even and regular as a painted mountain; Wagner, with queer white gashes where the snow still lay in its ravines, and to the southeast the misty range of snow-covered hills that were the Siskeyous. He felt decidedly better. And when he saw old Silas Lennox waiting patiently beside the station, he felt he had come to the right place.

It would be interesting to explain why Dan at once recognized the older man for the breed he was. But unfortunately, there are certain of the many voices that speak within the minds of human beings of which scientists have never been able to take phonographic records. They simply whisper their messages, and their hearer, without knowing why, knows that he has heard the truth. Silas Lennox was not dressed in a way that would distinguish him. It was true that he wore a flannel shirt, riding trousers, and rather heavy, leathern boots. But sportsmen all over the face of the earth wear this costume at sundry times. Mountain men have a peculiar stride by which experienced persons can occasionally recognize them; but Silas Lennox was standing still when Dan got his first glimpse of him. The case resolves itself into a simple matter of the things that could be read in Lennox's face.

Dan disbelieved wholly in a book that told how to read characters at sight. Yet at the first glance of the lean, bronzed face his heart gave a curious little bound. A pair of gray eyes met his—two fine black points in a rather hard gray iris. They didn't look past him, or at either side of him, or at his chin or his forehead. They looked right at his own eyes. The skin around the eyes was burned brown by the sun, and the flesh was so lean that the cheek bones showed plainly. The mouth was straight; but yet it was neither savage nor cruel. It was simply determined.

But the strangest part of all was that Dan felt an actual sense of familiarity with this kind of man. To his knowledge, he had never known one before; and it was extremely doubtful if, in his middle-western city, he had even seen the type. In spite of the fact that he thinks nothing of starting out thirty miles across the snow on snowshoes, the mountain man cannot be called an extensive traveler. He plans to go to some great city once in a lifetime and dreams about it on night, but rather often the Death that is everyone's next-door neighbor in the wilderness comes in and cheats him out of the trip. Few of the breed had ever come to Gitcheapolis. Yet all his life, Dan felt, he had known this straight, gray-eyed mountain breed even better than he knew the boys that went to college with him. At the time he didn't stop to wonder at the feeling. He was too busy looking about. But the time was to come when he would wonder and conclude that it was just another bit of evidence pointing to the same conclusion. And besides this unexplainable feeling of familiarity, he felt a sudden sense of peace, even a quiet sort of exultation, such as a man feels when he gets back into his own home country at last.

Lennox came up with a light, silent tread and extended his hand. "You're Dan Failing's grandson, aren't you?" he asked. "I'm Silas Lennox, who used to know him when he lived on the Divide. You are coming to spend the summer and fall on my ranch."

The immediate result of these words, besides relief, was to set Dan wondering how the old mountaineer had recognized him. He wondered if he had any physical resemblance to his grandfather. But this hope was shot to earth at once. His telegram had explained about his malady, and of course the mountaineer had picked him out simply because he had the mark on the disease on his face. As he shook hands, he tried his best to read the mountaineer's expression. It was all too plain: an undeniable look of disappointment.

The truth was that even in spite of all the Chamber of Commerce head had told him, Lennox had still hoped to find some image of the elder Dan Failing in the face and body of his grandson. But at first there seemed to be none at all. The great hunter and trapper who had tamed the wilderness about the region of the Divide—as far as mortal man could tame it—had a skin that was rather the color of old leather. The face of this young man was wholly without tinge of color. Because of the thick glasses, Lennox could not see the young man's eyes; but he didn't think it likely they were at all like the eyes with which the elder Failing saw his way thru the wilderness at night. Of course he was tall, just as the famous frontiersman had been, but while the elder weighed one hundred and ninety pounds, bone and muscle, this man did not touch one hundred and thirty. Evidently the years had brought degeneracy to the Failing clan. Lennox was desolated by the thought.

He helped Dan with his bag to a little wiry automobile that waited beside the station. They got into the two front seats.

"You'll be wondering at my taking you in a car—clear to the Divide," Lennox explained. "But we mountain men can't afford to drive horses any more where a car will go. This time of year I can make it fairly easy—only about fifteen miles on low gear. But in the winter—it's either a case of coming down on snowshoes or staying there."

And a moment later they were starting up the long, curved road that led to the Divide.

During the hour that they were crossing over the foothills, on the way to the big timbers, Silas Lennox talked a great deal about the frontiersman that had been Dan's grandfather. A mountain man does not use profuse adjectives. He talks very simply and very straight, and often there are long silences between his sentences. Yet he conveys his ideas with entire clearness.

Dan realized at once that if he could be, in Lennox's eyes, one-fifth of the man his grandfather had been, he would never have to fear again the look of disappointment with which his host had greeted him at the station. But instead of reaching that high place he had only—death. He was never to be one of this strong breed from which his people sprang. Always they would accept him for the memories that they held of his ancestors, pity him for his weakness, and possibly be kind enough to deplore his death. He never need fear any actual expressions of scorn. Lennox had a natural refinement that forbade it. Dan never knew a more intense desire than that to make good in the eyes of these mountain men. Far back, they had been his own people; and all men know that the upholding of a family's name and honor has been one of the greatest impulses for good conduct and great deeds since the beginning of civilization. But Dan pushed the hope out of his mind at once. He knew what his destiny was in these quiet hills. And it was true that he began to have secret regrets that he had come. But it wasn't that he was disappointed in the land that was opening up before him. It fulfilled every promise. His sole reason for regrets lay in the fact that now the whole mountain world would know of the decay that had come upon his people. Perhaps it would have been better to have left them to their traditions.

He had never dreamed that the fame of his grandfather had spread so far. For the first ten miles, Dan listened to stories—legends of a cold nerve that simply could not be shaken; of a powerful, tireless phssique; of moral and physical strength that was seemingly without limit. Then, as the foothills began to give way to the higher ridges and the shadow of the deeper forests fell upon the narrow, brown road, there began to be long gaps in the talk. And soon they rode in utter silence, evidently both of them absorbed in their own thoughts.

Dan did not wonder at it at all. Perhaps he began to faintly understand the reason for the silence and the reticence that is such a predominant trait in the forest men. There is a quality in the big timber that doesn't make for conversation, and no one has ever been completely successful in explaining what it is. Perhaps there is a feeling of insignificance, a sensation that is particularly insistent in the winter snows. No man can feel like talking very loudly when he is the only living creature within endless miles. The trees, towering and old, seem to ignore him as a being too unimportant to notice. And besides, the silence of the forest itself seems to get into the spirit, and the great, quiet spaces that lie between tree and tree simply dry up the springs of conversation. Dan did not feel oppressed at all. He merely seemed to fall into the spirit of the woods, and no words came to his lips. He began to watch the ever-changing vista that the curving road revealed.

First there had been brown hills, and here and there great heaps of stone. The brush had been rather scrubby, and the trees somewhat sickly and brown. But now, as the men mounted higher, they were coming into open forest. The trees stood one and one, perfect, dark-limbed, and only the carpet of their needles lay between. The change was evidenced in the streams too. They were faster, whiter with foam, and the noise of their falling waters carried farther thru the still woods. The road followed the long shoulder of a ridge, an easy grade of perhaps six per cent, but Dan counted ridges sloping off until he was tired.

By now the smaller wild things of the mountains began to present themselves a breathless instant beside the road. These little people have an actual purpose in the hills other than to furnish food for the larger forest creatures. They give a note of sociability, of companionship, that is sorely needed to dull the edge of the utter, stark lonesomeness and severity that is the usual tone of the mountains. The fact that they all live under the snow in winter is one reason why his season is especially dreadful to the spirit.

Every tree trunk seemed to have

its chipmunks, and they all appeared to be suffering from the same delusion. They all were afflicted with the idea that the car was trying to cut off their retreat, and only by crossing the road in front of it could they save themselves. This idea is a particularly prevalent one with wild animals; and it is the same instinct that makes a domestic cow almost invariably cross the road in front of a motorist. And it also explains why certain cowardly animals, such as the wolf or cougar, will sometimes seemingly without a cause on earth, make a desperate charge on a hunter. They think their retreat is cut off, and they have to fight. Again and again the chipmunks crossed at the risk of their lives. Sometimes the two men saw those big, flat-footed rabbits that are especially constructed for moving about in the winter snows, and more than once the grouse rose with a whir and beat of wings.

Every mile was an added delight to Dan. Not even wine could have brought a brighter sparkle to his eyes. He had begun to experience a vague sort of excitement, an emotion that was almost kin to exultation, over the constant stir and movement of the forest life. He didn't know that a bird dog feels the same when it gets to the uplands where the quail are hiding. He had no acquaintance with bird dogs whatever. He hadn't remembered that he had qualities in common with them—a long line of ancestors who had lived by hunting.

Once, as they stopped the car to fill the radiator from a mountain stream, Lennox looked at him with sudden curiosity. "You are getting a thrill out of this, aren't you?" he asked wonderingly.

It was a curious tone. Perhaps it was a hopeful one, too. He spoke as if he hardly understood.

"A thrill!" Dan echoed. He spoke as a man speaks in the presence of some great wonder. "Good Heavens, I never saw anything like it in my life."

"In this very stream," the mountaineer told him joyously, "you may occasionally catch trout that weigh three pounds."

But as he got back into the car, the look of interest died out of Lennox's eyes. Of course, any man would be somewhat excited by his first glimpse of the wilderness. It was not that he had inherited any of the traits of his grandfather. It was absurd to hope that he had. And he would soon get tired of the silences and want to go back to his cities. He told his thought—that it would all soon grow old to him; and Dan turned almost in anger.

"You don't know," he said. "I didn't know myself, how I would feel about it. I'm never going to leave the hills again."

"You don't mean that.

"But I do." He tried to speak further but he coughed instead "But I couldn't if I wanted to. That cough tells you why, I guess."

"You mean to say—" Silas Lennox turned in amazement. "You mean that you're a—goner? That you've given up hope of recovering?"

"That's the impression I meant to convey. I've got a little over four months—though I don't see that I'm any weaker than I was when the doctor said I had six months. Those four will take me all thru the fall and the early winter. And I hope you won't feel that you've been imposed upon—to have a dying man on your hands."

"It isn't that." Silas Lennox threw his car into gear and started up the long grade. And he drove clear to the top of it and into another glen before he spoke again. Then he pointed to what looked to Dan like a brown streak that melted into the thick brush. "That was a deer," he said slowly. "Just a glimpse, but your grandfather could have got him between the eyes. Most like as not, though, he'd have let him go. He never killed except when he needed meat. But that—as you say—ain't the impression I'm trying to convey."

He seemed to be grouping for words.

"What is it, Mr. Lennox?" Dan asked.

"Instead of being sorry, I'm mighty glad you've come," Lennox told him. "It's not that I expect you to be like your grandfather. You haven't had his chance. But it's always the way of true men, the world over, to come back to their own kind to die. That deer we just saw—he's your people, and so are all these ranchers that grub their ilves out of the forests—they are your people, too. The bears and the elk, and even the porcupines. Though you likely won't care for 'em, it's almost as if they were your grandfather's own folks. And you couldn't have pleased the old man's old friends any better, or done more for his memory, than to come back to his own land for your last days."

There were great depths of meaning in the simple words. There were significances, such as the love that that the mountain men have for their own land, that came but dimly to Dan's perceptions. The words were strange, yet Dan intuitively understood. It was as if a prodigal son had returned at last, and although his birthright was squandered and he came only to die, the people of his home would give him kindness and forgiveness, even though they could not give him their respect.

CHAPTER IV

The Lennox home was a typical mountain ranch-house—square, solid, comforting in storm and wind. Bill was out to the gate when the car drove up. He was a son of his father, a strong man in body and personality. He, too, had heard of the elder Failing, and he opened his eyes when he saw the slender youth that was his grandson. And he led the way into the white-walled living-room.

The shadows of twilight were just falling; and Bill had already lighted a fire in the fireplace to remove the chill that always descends with the mountain night. The whole long room was ruddy and cheerful in its glare. At once the elder Lennox drew a chair close to it for Dan.

"You must be chilly and worn-out from the long ride," he suggested quietly. He spoke in the tone a strong man invariably uses toward an invalid. But while a moment before Dan had welcomed the sight of the leaping, life-giving flames, he felt a curious resentment at the worlds.

"I'm not cold," he said. "It's hardly dark yet. I'd sooner go outdoors and look around."

The elder man regarded him curiously, perhaps with the faintest glimmer of admiration. "You'd better wait till tomorrow, Dan," he replied. "Bill will have supper soon, anyway. Tomorrow we'll walk up the ridge and I'll see if I can show you a deer. You don't want to overdo too much, right at first."

"But, good Heavens! I'm not going to try to spare myself while I'm here. It's too late for that."

"Of course, but sit down now, anyway. I'm sorry that Snowbird isn't here."

"Snowbird is—"

"My daughter. My boy, she can make a biscuit! That's not her name, of course, but we've always called her that. She got tired of keeping house and is working this summer. Poor Bill has to keep house for her, and no wonder he's eager to take the stock down to the lower levels. I only wish he hadn't brought 'em up this spring at all; I've lost dozens from the coyotes."

"But a coyote can't kill cattle—"

"It can if it has hydrophobia, a common thing in the varmints this time of year. But as I say, Bill will take the stock down season, and then Snowbird's work will be thru, and she'll come back here."

"Then she's down in the valley?"

"Far from it. She's a mountain girl if one ever lived. Perhaps you don't know the recent policy of the forest service to hire women when they can be obtained. It was a policy started in wartimes and kept up now because it is economical and efficient. She and a girl from college have a cabin not five miles from here on old Bald Mountain, and they're doing lookout duty."

Dan wondered intensely what lookout duty might be. His thoughts went back to his early study of forestry. "You see, Dan," Lennox said in explanation, "the government loses thousands of dollars every year by forest fire. A fire can be stopped easily if it is seen soon after it starts. But let it burn awhile, in this dry season, and it's a terror—a wall of flame that races thru the forests and can hardly be stopped. And maybe you don't realize how enormous this region is—literally hundreds of miles across. We're the last outpost—there are four cabins, if you can find them, in the first seventy miles back to town. So they have to put lookouts on the high points, and now they're coming to the use of aeroplanes so they can keep even a better watch. All summer and until the rains come in the fall, they have to guard every minute, and even then sometimes the fires get away from them. And one of the first things a forester learns, Dan, is to be careful with fire."

"Is that the way they are started—from the carelessness of campers?"

"Partly. There's an old rule in the hills: put out every fire before you leave it. Be careful with the cigar butts, too—even the coals of a pipe. But, of course, the lightning starts many fires, and, I regret to say, hundreds of them are also started with matches."

"But why on earth—"

"It doesn't make very good sense, does it? Well, one reason is that certain stockmen think that a burned forest makes good range—that the under-vegetation that springs up when the trees are burned makes good feed for stock. And you must know, too, that there are two kinds of men in the mountains. One kind—the real mountain man, such as your grandfather was—lives just as well, just as clean as the ranchers in the valley. Some of this kind are trappers or herders. But there's another class, too—the most unbelievably shiftless, ignorant people in America. They have a few acres to raise crops, and they kill deer for their hides, and most of all they make their living fighting forest fires. A fire means work for every hill-billy in the region—often five or six dollars a day and better food than they're used to. Moreover, they can loaf on the job, put in claims for extra hours, and make what to them is a fortune.

"You'll see a few of the breed before—before your visit here is ended. There's a family of 'em not three miles away—and that's real neighborly in the mountains—by the name of Cranston. Bert Cranston traps a little and makes moonshine; you'll probably see plenty of him before the trip is over. Sometime I'll tell you of a little difficulty that I had with him once. You needn't worry about him coming to this house; he's already received his instructions in that matter.

"But I see I'm getting all tangled up in my traces. Snowbird and a girl friend from college got jobs this summer as lookouts—all thru the forest service they are hiring women for the work. They are more vigilant than men, less inclined to take chances, and work cheaper. These two girls have a cabin near a spring, and they cook their own food, and are making what is big wages in the mountains. I'm rather hoping she'll drop over for a few minutes tonight."

"Good Lord—does she travel over these hills in the darkness?"

The mountaineer laughed—a delighted sound that came somewhat curiously from the bearded lips of the stern, dark man. "Dan, I'll swear she's afraid of nothing that walks the face of the earth—and it isn't because she hasn't had experiences either. She's a dead shot with a pistol, for one thing. She's physically strong, and every muscle is hard as nails. She used to have Shag, too—the best dog in all these mountains. She's a mountain girl, I tell you; whoever wins her has got to be able to tame her!" The mountaineer laughed again. "I sent her to school, of course, but there was only one boy she'd look at—the athletic coach! And it wasn't his fault that he didnt' follow her back to the mountains."

The call to supper came then, and Dan got his first sight of mountain food. There were potatoes, newly dug, mountain vegetables that were crisp and cold, a steak of peculiar shape, and a great bowl of purple berries to be eaten with sugar and cream. Dan's appetite was not as a rule particularly good. But evidently the long ride had affected him. He simply didn't have the moral courage to refuse when the elder Lennox heaped his plate.

"Good Heavens, I can't eat all that," he said, as it was passed to him. But the others laughed and told him to take heart.

He took heart. It was a singular thing, but at that first bite his sudden confidence in his gustatory ability almost overwhelmed him. All his life he had avoided meat. His mother had always been convinced that such a delicate child as he had been could not properly digest it. But all at once he decided to forego his mother's philosophies for good and all. There was certainly nothing to be gained by following them any longer.

They walked together out to the gate, across the first of the wide pastures where, at certain seasons, Lennox kept his cattle; and at last they came out upon the tree-covered ridge.

Then both of them were startled out of their reflections by the clear, unmistakable sound of footsteps on the ridge. Both of them turned, and Lennox laughed softly in the darkness. "My daughter," he said. "I knew she would not be afraid to come."

(Continued Next Week.)

Markets

PHILADELPHIA PRODUCE

—Dec. 20, 1920.

As is usually the case during the several days preceding Christmas, the fruit and produce trade give more of their attention to the so-called holiday specialties, such as turkeys and other kinds of poultry, fancy fruits, cranberries, oranges, etc., and the general lines of vegetables such as potatoes, cabbage, carrots, turnips, etc., are more or less neglected. Turkeys are bringing very fine prices, the average good turkey selling generally from 55@60c lb., with strictly fancy Delaware and Maryland turkeys bringing 60@65c lb. The western turkeys are also very firm and active and advanced 2c per lb. this morning selling at 56@58c on best with common to ordinary at 45@50c. There was also an advance in fancy roasting chickens this morning with sales ranging from 32@39c lb. Fowls ruled firm at 30@37c, and broilers were active at 42@48c lb. Ducks also show an advance of fully 2c lb. selling at 38@42c and there was also an advance in geese which are now selling at 34@36c. All the foregoing prices apply to the dressed poultry market, live poultry selling about as follows: Heavy fowls, 27@28c; small fowls, 25@26c; leghorn fowls, 24@26c. Spring chickens, 24@30c; leghorn spring chickens, 24@25c. Turkeys, 45@50c; ducks, 25@35c; geese, 27@33c.

Vegetables—As we stated above potatoes are generally neglected during the Christmas holidays, the trade as a rule only purchasing enough for their immediate needs, and this season is no exception, the market easing off this morning, so that now Penna. potatoes are selling at $1.25@1.50 cwt., with the fancy potatoes at $1.60@1.75 per cwt. The nearby N. J. potatoes are bringing from 50@70c ⅝ bskt. on the No. 1s with the No. 2s slow at 25@35c. Bunch beets are firm at 4@5c bch. Penna. winter beets are selling at $1.50@2.50 bbl. emptied. Brussel sprouts have advanced during the past few days, and sales are now being made mostly at 16@20c qt. Cabbage also neglected at this holiday season, and is now selling at $10@12 per ton, with poorer still lower. Carrots more plentiful and lower, the N. Y. state stock selling at $1@1.15 100-lb. sack, while the nby. Penna. and N. Js. bring $2@2.75 bbl. emptied. Cauliflower extremely low last week firmed up this morning and best sold at $1.60@1.85 crate. Celery is very plentiful and cheap, besides the liberal supplies of Penna. and N. J. and N. Y. stock sold at $2@3.50 crate. Nearby Penna. and N. J. celery is selling from 6@17c bch. as to size and quality, mostly 10@12c bch. Market is practically bare of cucumbers. Nby. horseradish is scarce and selling at 15@16c lb. Florida lettuce sold at $1.50@1.75 hmpr. Onions were plentiful and dull at mostly $1@1.25 sk., with fancy western up to $1.35@1.40 sk. Mushrooms are ruling steady at $1.25@1.75 per 3-lb. bskt. Parsnips at 50@65c ⅝ bskt. Peppers are scarce selling up to $8 crate. Penna. hot house radishes 4@5c bch. White turnips are $1.50@2.25 bbl. emptied. Penna. yellow rutabagas are 60@75c per ⅝ basket. Spinach has also advanced. Norfolk Spinach today sold mostly at $2.50 bbl. with some at $2.75 bbl. Sweet potatoes are plentiful and lower. The Eastern Shore sweet potatoes sold at $1.15@1.25 hmpr. and $1.75@3 bbl., N. J. sweet potatoes 85c@$1.15 ⅝-bskt. on No. 1s with No. 2s at 40@65c ⅝ bskt. Yams are $2.50@3 bbl., and $1.60@1.65 hmpr. Very little watercress selling at 3 cents bunch.

Fruits—The market is ruling about steady on apples at the following range of prices. Barrels: Baldwin $2@4; fancy Pa. Baldwins $4.50@5; Greening, $1.75@4; York Imperial, $2@4; fancy 3-inch York Imperials, $5; Kings, $2.75@4.75; Neros, $3@3.50; Hubbardsons, $3@3.50; Stayman Winesaps, $4@5; Rome Beauty, $4@5.50; Black Twig, $4@5; other varieties $3@4. Boxes, Rome Beauty, extra fancy, $2.50@3.25; Spitzenbergs, extra fancy, $1.75@3.50; New Towns, ex fancy, $2@2.50; Jonathans, $1.25@2. Cranberries are ruling very firm at full former values of $10@16 bbl., and $2.50@5 crate. One car of Kieffer pears sold here this morning at $2.50@4 bbl. Oranges are selling mostly from $2.50@4 box. Tangerines $1.50@3.75 per half box.

Eggs—Since our last week's report there has been quite some decline in the egg market and prices prevailing at this writing are quite a little lower than we reported one week ago. At this time Penna. and other nearby current receipts are quotable at 73½c per doz., with nearby firsts at 75½@77½c and fancy selected at 87@88c doz. The western firsts are quoted at 71@72c and the western extra firsts at 75½@77½c doz.

Decorating Greens—The supplies of Christmas decorating greens are rather light this year and good prices are being realized. Loose holly is selling at $4.50@5.50 per case, and holly wreaths bring all the way from 10c up to 25c each. Laurel is bringing the good price of 3½@5c per yard. Mistletoe seems to be fairly plentiful this year and is reasonable in comparison with the other greens. Barrels ranging from $2@5, and in hampers at $1.50@2.25.

PITTSBURGH PRODUCE

—Dec. 18, 1920

Butter—Prints, 58@58½c; tubs, 57½@58c; cooking, 45@50c; Ohio, 53½@54½c.

Cheese—New York full cream, 31@32c; Wis. Swiss, 49@50c; do 20-lb. block, 31@32c; Swiss 5-lb. brick, 33@34c; Longhorns, 30@31c; Limburger, 1-lb., 33c; do 2-lb. 32c.

Eggs—Fresh select, 83@85c; current receipts, 76@80c; candled storage, 56@57c; do at mark, 52@54c.

Vegetables—Potatoes, Mich., sack, $2.75@2.85; do bulk, 100 lbs. $1.50@1.75; sweet potatoes, hmpr. $2@2.50; onions, Spanish, crt. $1.65@1.75; do h. g. 100-lb. sack, 75c@$1; cabbage, h. g. bbl., $1.50@1.75; cauliflower, Cal. crate, 50c@$2.25; Brussels sprts., qt., 15@20c; watercress, doz., 40@50c; turnips, bu., $1.50@2; parsley, doz. 50@75c; radishes, doz., 25@35c; carrots, bu., $1.25@1.50; celery, bunch, 25@90c; peppers, Fla. crate, $6@7; parsnips, bu., $1.25@1.50.

Fruits—Lemons, Cal. box, $2@4; oranges, Cal. Navel, box $3.50@5.50; apples, bu., $1.15@1.50; do Wash., box, $2@5.50; pears, box, $6@6.50; grapefruit, crate, $2@4; cranberries, bbl., $15@16; coconuts, sack, $6.50@7; grapes, Almeria, Span., keg, $6@15; do Emperor, Cal. keg, $7@8; walnuts, black, lb., 4@4½c do English, lb., 25@28c; hickory nuts, lb. 8@10c; mixed nuts, box, $5@5.25.

LANCASTER PRODUCE

—Dec. 20, 1920.

The markets here today assumed Christmas aspect. The abundance of trees and greens vieing with the good things for the Christmas dinner. Eggs were plentiful and took a drop in price at 78 cents a dozen. Chickens were plentiful and before the closing of markets were as low as 75 cents apiece. Turkeys, while scarce, were obtainable at 60c a lb. live weight, and 90c dressed; and country lard sold at 25c lb. while chain stores sold for 21c in town. The quotations:

Butter and Eggs—Country butter, 65@70c lb.; creamery butter, 75c; fresh eggs, 78@85c doz.; duck eggs, 90c doz.; goose eggs, 8@10c each.

Poultry—Chickens, 75c@$2.25 ea.; squabs, 35c ea.; turkeys, $6@9 ea.; geese, $3.50@5.50 ea.; ducks, $1.75@2.50.

Vegetables—Red beets, 5c bch.; 15c ¼-pk. Cabbage, 5@10c hd.; cauliflower, 15@25c; celery, 5, 10@15c stalk; carrots, 5@8c box, 15c ¼-pk.; eggplants, 15@20c ea.; lettuce, 10, 15@25c hd.; endive, 5@10c hd.; onions, 8@10c box, 15c ¼ pk.; 75c ⅝-bskt.; parsnips, 3@5c ea.; peppers, 3@5c ea.; potatoes, 20@25c ½-pk.; $1.15@1.25 bu.; sweet potatoes, 20@40c ½-pk.; parsley, 3@5c per bch.; radishes, 5@8c bch.; summer squashes, 5@10c ea.; pumpkins, crook-necks, 8@15c ea.; spinach, 25@30c ½-pk.; turnips, 20c ½-peck.

Fruits—Apples, 20@40c ½-pk.; $1.25@1.75 bu.; cranberries, 15@20c qt.; pears, 20@30c ½-pk.; 75c ⅝-bu. bskt.

Miscellaneous—Cider, 40c gal.; hominy, 12@15c pt.; apple butter, 25c pt.; walnuts, 10c box; pudding, 28@30c lb.; sausage, 30c lb.; scrapple, 15c lb.; mince meat, 25c pt.

YORK PRODUCE

—Dec. 20, 1920.

Market conditions are about normal for this time of the year. It was hoped by some of the truckers that conditions would improve around the holidays, both in price and consumption, but such is not the case. In fact the markets have been much more dull for the past ten days than previously. A heavy drop in egg prices was the special feature of the week.

Eggs—70@90c dozen.

Butter—Country, 65@70c lb.; separator, 70@75c lb.; milk, 12c qt.

Poultry—Hens, 22@25c lb., dressed, 75c@$2 each.

Vegetables—Potatoes, 10@20c ½-pk.; 75c@$1.25 bu.; lettuce, 5@15c hd.; cabbage, 3@6c hd.; beets, 5c box; onions, 8@10c bx.; 18@20c ½ pk.; lima beans, 35c qt.; soup beans, 25c qt.; squash, 3@5c ea.; turnips, 10@15c ¼ pk.; hams, green, 30@35c lb.; smoked, 40@45c lb.; sliced, 40@80c lb.; lard, 20@22c lb.

Fruit—Apples, 10@30c ½-pk.; 50c@$1.75 bu.; pears, 5c box, 25@30c ½-pk.; walnuts, 10@12c box, nuts, 10c box, tomatoes, 10c box; 3@10c ea.

Retail Grain Market—Wheat, $2; corn, $1.50; oats, $1; rye, $1.75; bran, $2.75 cwt.; middlings, $3 cwt.

Wholesale Grain Markets—Wheat, $1.70; corn, $1; oats, 55c; rye, $1.25; bran, $45 ton; middlings, $5 ton.

NEW YORK PRODUCE

—Dec. 18, 1920.

Butter firm; receipts, 3930; tubs, creamery, higher than extras, 55½@56c; extra (92 score), 55c; first (88 to 91 score), 43@53½c; packing stock, current make, No. 2, 22@22½c.

Eggs steady; receipts, 8318 cases. Fresh gathered, extra first, 75c; do first, 63@74c; State, Penna. and nearby western hennery white, first to extra, 80@85c; do brown, extra, 77@78c; do brown and mixed colors, first to extra, 73@76c; refrigerator, first to finest, 60@62c.

Cheese irregular, receipts, 1780 boxes; State whole milk flats, held, specials, early made, 27½@28c; do fair madse, 25@26½c; do average run, 24@25c; state, whole milk flats, fresh, specials, 24@25c; do average run, 22@22½c.

Poultry—Live not quoted. Dressed steady, fowls, 23@28c; others unchanged.

Vegetables—Potatoes, bbl. Bermuda, $7@11; Me., 180-lb. bag, $3.50@4.25; do 165-lb. bag, $3.25@3.50; state, 180 lb., $3@4; do 150-lb. bag, $2.50@3; Pa., 165-lb. $3@3.25; L. I. bbl. $3.75@4.25; Jersey, long, 165-lb., $2.75@3; No. 2, $1@1.75; sweets, Jersey, 1s bskt., $1.50@1.85; Jy., 2s, bskt. 75c@$1.25; apples, bskts., fancy, $1.25@1.40; average, 50c@$1; bbls., York Imperial, cold storage, $3.50@4.50; poor, $2.50@3; kale, Va., bbl., 75c@$1.25; onions, state and Western, red, 50c@$1.50; yellow, bag, 50c@$1.25. Apples western boxes, Spitzenberg, $2@4.50; Ortley, $1.75@3.50; Delicious, $3.50@6; Stayman, $2@3.50; Wagner, $3@4; McIntosh, $1.75@3.25; Rome Beauty, $1.50@3.50.

LIVESTOCK MARKETS

PITTSBURGH

—Dec. 20, 1920.

Cattle—Receipts, 500 head; lower; steers, $11.25@12; heifers, $8@9.50; cows, $6.50@7.50.

Hogs—Receipts, 11,500 head; steady; heavies, $9.50@9.75; heavy yorkers and light yorkers, and pigs, $10@10.25.

Sheep and Lambs—Receipts, 500 head, steady; top sheep, $6; top lambs, $11.25; lower.

Calves—Receipts, 700 head; higher; top, $15.

CHICAGO

Cattle—18,000 head; beef steers steady to lower; top, $12.50; few others, $11@12; fat cows steady to 25c higher; heifers mostly 25c higher; bulk (she stock), $4.50@6.50; canners steady, mostly $3; bulk, 25c lower; good and choice, $5.50@5.90; calves steady to 50c lower; quality poor; bulk vealers, $8.50@9; stockers and feeders steady.

Hogs—50,000 head; active, mostly 10c lower tahn Saturday's average; top, $9.35 for to 170-lb. averages; practical top, $9.30; bulk, $8.95@9.15; pigs, steady to 10c lower; bulk desirable, 90 to 130-lb. pigs, $9.35@9.50.

Sheep—24,000 head; best, fat classes steady; others unevenly strong to 25c higher; lambs, top, $1.75; bulk, $9.50@10.50; top yearlings, $8.10; bulk, $7.25@8; bulk ewes, $3.50@4; no sales feeder lambs, feeder yearling wethers, $8; choice breeding ewes, $5.50.

NEW YORK

Cattle receipts 4990 head; firm; steers, $7.50@11.25; bulls, $5@8; cows, $2@7.50.

Calves—Receipts, 2550 head; steady, veals, $12@17.50; culls, $8@11; little calves, $6@8; barnyard calves, $4.50@5.50; fed calves, $6@8; yearlings, $4.50@5.

PHILADELPHIA LIVESTOCK

Receipts for week ended Dec. 20, 1920.

	Cattle.	Sheep and lambs.	Hogs.
Totals for week	2870	9801	10868
Previous week	2239	7826	10957

Calves, receipts of calves were 1140 head as against 1444 previous week.

Beef Cattle—Steers and cows ruled steady under moderate offerings, but trade was quiet, buyers operating only for immediate needs. Veal of fine quality was firm and slightly higher, but the medium and under grades showed no important change. Quotations: Steers, good to choice, $10@12; fair to good, $9@10; common to fair, $8@9; cows, western, good to cohice, 6½@7½c; do fair to good, 5½@6½c; bulls, 4½@7c; calves, extra to choice, $16.50@17; fair to good, $14@15; common, $10@12; Tennessee, $12@14; other southerns, $6@10.

Sheep and Lambs—There was a fair demand for mutton of desirable quality at steady prices. Lamb was dull and easier, under more liberal receipts. Quotations: Sheared sheep, wethers, extra, $6.50@7; do good to choice, $5.50@6; medium, $4.50@5.50; do common, $1@3; ewes, heavy, fat, $1.50@5; lambs, spring, choice, West Va., $12.50@13; choice Penna., $12@12.50; medium, $10.50@11.50; common, $8.50@9.50.

Hogs—The market was quiet and unchanged, with fairly liberal supplies. We quote: Best western, $12@12.50; nearby, good, $10.50@10.75.

City Dressed Stock—Steers, heifers and cows ruled steady under moderate offerings and a fair demand. Veal and mutton were steady with demand fair for fine stock. Lamb was quiet and easier. Hogs were dull and lower. We quote: Steers, 14@22c; heifers, 12@16c; cows, 10@12c; calves, city dressed, choice, 28@30c; calves, country dressed, 26@28c; lambs, spring choice, 25@37c; sheep, 8@14c; hogs, 17c.

PHILADELPHIA HAY AND GRAIN

—Dec. 18, 1920.

Baled Hay and Straw—Receipts, 276 tons of hay and 4 cars of straw. Dull and weak to sell. We quote: Timothy hay, No. 1, none here; No. 2, $28@28.50; No. 3, $25@26; sample, $22@24; no grade, $18@20; clover-mixed hay, light mixed, $26@27; No. 1 mixed, $24@25; straw, No. 1 straight rye, $20@21; No. 2, $19@19.50; No. 1 tangled rye, $17.50@18.50; No. 2 do, $17@17.50; No. 1 wheat straw, $17@17.50; No. 2 do, $16@16.50.

Bran sold slowly and prices favored buyers. We quote: Car lots, including sacks, soft winter bran, in 100-lb. sacks, per ton, $38@39; spring bran, in 100-lb. sacks, per ton, $37@38.

Provisions quiet but steady. We quote as follows: Beef, in sets, smoked and air dried, 53c; beef knuckles and tenders, smoked and air dried, 54c; pork, family, 47c; hams, S. P. cured, loose, 27@29c; do skinned, loose, 25@26c; do do smoked, 27@28c; do boiled, boneless, 46c; picnic shoulders, S. P. cured, loose, 24½c; do smoked, 26½c; bellies, in pickle, loose, 25c; breakfast bacon, 31c; lard, 24c.

NEW YORK HAY AND GRAIN

Dec. 18, 1920.

Feed—The market for mill feed was again dull and weak. Buyers were very indifferent and continued to feel the lack of demand from consumers who were evidently limiting the use of feed as far as possible. Mill offers were quite liberal and stocks were evidently accumulating despite the small production.

Quotations: City feed bran, $37; middling, $47, in 100-pound sacks; red dog, $50, nominal, in 100-lb. sacks; Western spring bran, $36; standard middling, $34; flour middling, $41; red dog, $50, all in 100-lb. sacks, 30-day shipment. Oat feed, $18; rye middlings, $32; white hominy feed, $41; all in 100-pound sacks. Cottonseed oil meal, $41; linseed oil meal, $46, in 100-lb. sacks.

Hay and Straw—The market is easy and values are sustained with difficulty. No change in prices today, though receivers are more and more inclined to shade their asking prices. Straw steady and without change.

Hay—Large bales, timothy, No. 1, $38@39; No. 2, $36@38; No. 3, $33@35; shipping, $30@32; clover mixed, fancy, $37@36; No. 1, $35@36; No. 2, $31@33; small bales, clover mixed, fancy, $36@37; No. 1, $33@34; No. 2, $29@30; straw, large bales, No. 1 rye, $20@22; No. 1 oat, $16.

Wheat—No. 3 red f. o. b., $1.96; No. 2 hard winter, $1.96.

Corn—No. 2 yellow, 68¾c; No. 2 mixed, 63¾c; No. 2 white, 63¾c.

Oats—No. 1 white, 62c; No. 2 white, 62c; No. 3 white, 61c; No. 4 white, 59½c.

Rye—C. i. f., $1.77. **Barley**, c. i. f., malting, 99c@$1.08; feeding, 89@95c.

PITTSBURGH HAY AND GRAIN

—Dec. 18, 1920.

While the receipts of hay have eased up considerably within the last week, nevertheless the arrivals seem equal to the demand. Clover, clover mixed and prairie hay are very difficult to dispose of at present, but market should do better as receipts and billings are running light. No doubt we will see a much improved demand immediately after the holidays. Straw is needed as receipts are extremely light, all arrivals being readily placed at top figures. Receipts of oats and shelled corn are fully equal to the demand while there is a fair call for ear corn. Quotations: No. 1 timothy, $29@29.50; standard timothy, $27@27.50; No. 2 timothy, $25.50@26.50; No. 3 timothy, $21@22; No. 1 light clover mixed, $26@27; No. 1 clover mixed, $26@27; No. 2 clover mixed, $20@22; No. 1 clover, $25@26; No. 2 clover, $18@20; No. 1 oat straw, $18@18.50; No. 2 oat straw, $17.50@18; No. 1 wheat straw, $17.50@18; No. 2 wheat straw, $17@17.50; No. 1 rye straw, $18@18.50; No. 2 rye straw, $17@18; No. 2 white oats, 55½@56c; No. 3 white oats, 51½@53c; No. 2 yellow ear corn, 85@90c; No. 2 yellow shelled corn, 90@91c.

PHILADELPHIA DAIRY MARKET

—Dec. 18, 1920.

Butter—Receipts, 1020 tubs. There was very little trading but supplies of desirable stock were small and the market was nominally firm at the late advance. We quote: Solid-packed creamery, fancy, high-scoring goods, 57@59c, the latter for jobbing sales, extra, 56c; extra firsts, 54@55c; firsts, 41@49c; seconds, 35@40c; sweet creamery choice to fancy, 58@60c; fair to good, 47@57c; ladle packed, as to quality, 26@28c; packing stock, 22@24c; fancy brands of nearby prints were jobbing at 65@67c; good to choice, 55@64c; fair to good, 52@54c.

Eggs—Receipts, 2069 cases. Demand was sufficient to absorb the very limited offerings of fine new-laid eggs, prices of which were firmly held. We quote the following: Nearby firsts, 75½@77½c per doz.; nearby current receipts, 73½c per doz.; western extra firsts, 75½@77½c; firsts, 72½@73½c; inferior lots lower; jobbing sales of fancy candled fresh eggs, 87@88c; fair to choice, 79@86c.

Cheese quiet and prices favored buyers. We quote: New York, whole milk, flats fancy, held, 27½@28c; do fair to good, held, 25@27c; do fancy, fresh, 24½@25c; fair to good, 22@24c; longhorns, held, 27c, do, fresh, 26½@27c; single daisies, held, 26@27c; do fresh, 25@26c; jobbing sales of fancy held goods, 30@34c.

NEW YORK MILK MARKET

—Dec. 20, 1920.

There is very little manufacturing at the present time; and altho supply liberal for this season, demand improving and distributors report a good clearance. The December rate for 3 per cent milk in 200-mile zone is $3.18 per 100 lbs.; add 4c per 100 lbs. for each one-tenth of 1 per cent extra butterfat.

Receipts of milk and cream in 40-quart cans for the week ending Dec. 18, 1920, were as follows:

Railroad.	Milk	Cream.
Erie	41,136	1,697
Susquehanna	12,726	108
West Shore	11,228	1,176
Lackawanna	54,914	1,427
New York Central (long haul)	172,566	1,705
Ontario	45,120	1,823
Lehigh Valley	50,609	643
New Haven	6,100	450
Pennsylvania	12,163	376
Other sources	6,500	250
Totals	412,862	9,504
Same week last year	353,838	11,479

TOBACCO MARKET

—Dec. 20, 1916.

True to their quiet and cunning policy of former years one of the largest packing concerns, is known to have bought more than 600 acres of 1920 Pennsylvania tobacco, as practically all growers who were approached, seemed willing to sell at what would be consideerd an attractive price, viz.: $21 to $25 per cwt. It is the general opinion that nothing but good judgment will save thousands of growers from financial sacrifice, after the holiday season, when the great onslaught comes as the buyers' are prepared for a "clean up."

Every one should estimate the value of his crop as to quality and take a stand for the same, bearing in mind that the prospects for selling as well as the outlook for good prices is promising also that the crop is better than usual and the demand will require every pound of the product, at fair prices if all remain firm in all requirements.

It is noticeable that a generally intelligent public, who would rebel against a continuation of high prices on the essentials of life pay little heed to tobacco, which is at present a luxury, it is therefore unnecessary for the factories to seek lower prices from the producers.

Some prominent economists have predicted that the present discouraging situation will end with the year and already there are many signs of improvement.

INTERSTATE MILK PRICES

—Dec. 18, 1920.

Interstate milk prices remain same.

MEASURES FOR FARM RELIEF

The fact that the farmer in "taking his medicine" during the deflation period has been administered an overdose is beginning to attract public attention and measures for relief are being rushed partly thru self-interest. The converse of the principle that when agriculture prospers everybody prospers is being fully demonstrated. The big reduction in farm buying power is inevitably reacting upon all those who cater to the wants of the farmer as a consumer.

Hopes may be raised too high by some of these measures, however, as their full capacity for helping the farmer may not be attained thru clashing of other interests which desire to obtain the benefit of the same measures.

Money, the alleged root of all evil, is apparently the chief trouble now. Farmers have asked for more liberality in extending loans and in discount rates so that they could market their crops in a more orderly manner and await a recovery of prices. Steps in this direction include the resolution which passed the Senate recommending that the Federal Reserve Board be more liberal to farmers and the planning of methods which will make the capital of the private investor available to the farmer as it now is to industry and commerce. Manifestly, the latter will take considerable time to work out altho it is very promising while the Senate resolution has no teeth and the House may dissent from its action.

Additional credit is needed also to be extended to foreign countries so that they may buy our products. Both governmental and private aid are being sought for this purpose. The War Finance Corporation may be revived if the House concurs in recent Senate action. Altho this organization did little to further exports before its dissolution last May, it was empowered in the original act to issue bonds to the extent of six times its capital stock of $500,000,000. Since the government must furnish this money, the proposal is opposed by the Secretary of the Treasury because of the large foreign indebtedness already held by the government and because the government is now a heavy borrower to meet its current obligations.

The corporations formed under the Edge Law unquestionably furnish in the long run a more appropriate method of financing exports. Thru these private capital is utilized. The most successful of these will probably be those backed by the producers of that commodity who may themselves furnish the necessary capital. Such an organization has recently been formed in the south for the export of cotton, the capital being subscribed by planters, and merchants and bankers particularly interested in the welfare of the cotton grower. In other words, the producers are financing their own exports.

The large Foreign Trade Financing Corporation just formed will help those groups of producers who try to take advantage of its facilities. Its promoters seem disposed to give farmers a voice in the organization since the plan announced provides for three directors from each Federal Reserve District, one farmer, one banker and one representative of other industry. Farmers will also be urged and expected to subscribe to its capital stock.

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TO you, our legion of friends, old and new, we send our heartiest Yuletide greetings.

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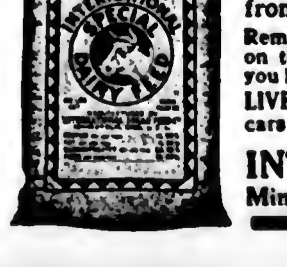

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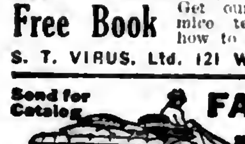

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INTERNATIONAL LIVE STOCK EXPOSITION

THE twenty-first annual International Live Stock Exposition was held at the Union Stock Yards, Chicago, Ill., Nov. 27 to Dec. 4. The total entries of livestock were larger than any previous show, although there was a slight falling off in numbers in both the horse and sheep departments. The quality of the livestock on exhibition was superior to that of any previous year, which is due in a measure to the fact that only the best herds from the various sections of the United States and Canada come together at this annual show. The entries in the various classes were not confined to the United States as many of them came from Canadian breeders.

The attendance was not up to the number of last year but this was due in a large measure to the current prices of livestock and farm products. The farmers of the grain growing sections did not attend the show in as large numbers as in previous years, due very largely to the depression in the price of farm crops. Visitors from the states of Nebraska and Kansas and other Middle Western states report that new corn is selling at from 32 to 45c a bushel and in many cases no sale for it can be found.

The second annual Grain and Forage Crop Show was held in connection with the International Livestock Exposition. The Chicago Board of Trade offered ten thousand ($10,000) dollars in premium money for the exhibits in the various classes. This liberal amount of money brought out a splendid exhibit of grain and forage crops of all kinds. This feature added materially to the interest and educational value of the Exposition.

The opening day of the Exposition was set aside as the day for the International Students' Judging Contest, the contestants being students from the various agricultural colleges of the United States and Canada. This year twenty-one institutions sent teams, each team consisting of five men. Of this number, eighteen teams came from the United States and three from Canada. The students are required to judge three classes of cattle, horses, sheep and swine. The experience gained by the students participating in the judging contest is of value to agricultural students in increasing their interest in livestock work. The judging team from Purdue University, Lafayette, Ind., won the contest with a total of 3796 points. The other teams followed in the order named and points scored: Nebraska, 3705; Iowa, 3653; Kansas, 3651; Minnesota, 3506; Ohio, 3494; Colorado, 3450; Penn State, 3446; Texas, 3435; Oklahoma, 3431; MacDonald College, Canada, 3406; Saskatchewan, 3384; Ontario, 3349; Missouri, 3286; West Virginia, 3283; Wisconsin, 3277; Kentucky, 3251; South Dakota, 3004; Syracuse University, 2914; Massachusetts, 2726; New Mexico, 2607.

Beef Cattle

A greater display of beef cattle in both the breeding and fat sections of all breeds has never been assembled in the United States. The fat classes were larger in most cases than in previous years and there were a greater number of high class individuals, especially among those within the range of premium money. In previous years the fat cattle show has been made up largely of entries from the various agricultural colleges of the United States. The beef cattle breeders of the United States and Canada are beginning to appreciate the value and importance of developing steers and are sending forth a greater number of entries for the International each year.

The champion Shorthorn steer came from the herd of W. C. Rosenberger and Son, Tiffin, O. This same steer was the champion Shorthorn when exhibited as a calf at the 1919 Exposition. The pure-bred Aberdeen-Angus steer Black Ruler came from Purdue University as a senior yearling. This steer was later made grand champion over all breeds. This is the third grand champion steer exhibited by Purdue University in the last four years and the fourth grand champion to come from the Indiana institution since the show was organized. The steer was sold at auction to Wilson and Company at $1.75 per pound. The champion Hereford steer was exhibited by Cyrus A. Tow of Norway, Iowa, in the junior yearling class. The grade and cross-bred champion steer was a junior yearling exhibited by the University of Nebraska. The champion Galloway came from the herd of Kansas Agricultural College.

The exhibit of Hereford breeding cattle was the largest that has ever been assembled on any show ground in America. The entries came from practically every section of the United States, with representatives from the foremost herds of the country. The grand champion bull came from the herd of Senator J. N. Camden, Versailles, Kentucky, being the junior yearling Princeps Domino. The grand champion female was Donna Woodford the Fifth, exhibited by N. E. Parrish of Reading, Pa., who made his initial show at the International. The Hereford breeding cattle was judged by John Thompson of Carbondale, Kas., in the absence of the South American judge whose boat failed to arrive in time to enable him to do the work.

The Shorthorn breeders, as usual, presented a strong show of high class animals. The number of entries in the various classes ranged from eighteen in the aged bull class to seventy-five in both the junior and senior calf classes. The judging was done by John Sibson of Argentine, who selected the cattle with plenty of scale, smoothness and good Shorthorn type. The grand champion bull was Pellipar Iris, exhibited by William Hartnett of Chicago, Ill. The champion female was exhibited by Frank Scofield of Hillsboro, Texas, and was a two-year-old entry Lady Supreme.

The number of Aberdeen-Angus breeding animals was larger than at the last International. The cattle exhibited were of a high order and showed the progress that has been made by the Aberdeen-Angus breeders. The grand champion bull came from the herd of Dr. J. I. Higgins, of Dandridge, Tenn.

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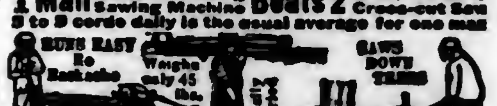

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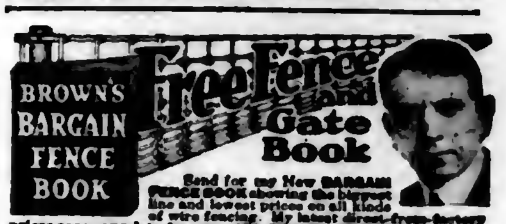

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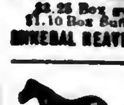

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HAMPSHIRES—Pigs either sex or pairs not akin 10 weeks and up. Reg. free and satisfaction guaranteed. E. O. WHISLER, Newville, Pa.

Big Type Poland China. Sired by Chief Lad, a grandsire of Mountain Giant, the $5,000 boar. Papers for Satisfaction guaranteed. I. S. Funston, Amberson, Pa.

REG. O. I. C. BOAR, one and a half years old. Sure breeder and gentle—a bargain.
BENJ. H. RUTLEDGE, Honesdale, Pa. R. F. D. 3.

CHESHIRES—A few good pigs and one service boar. Prize winning stock.
MORNINGSIDE FARM, SYLVANIA, PA.

REG. BIG TYPE POLAND CHINA pigs $15.00 each first of November delivery.
C. E. SECHLER, MARKLETON, PA.

PATHFINDER DUROC-JERSEYS—Some of America's best blood at farmers' prices.
SLATY RIDGE FARM, Palmyra, Pa., R. No. 1

HAMPSHIRE HOGS—8 weeks to 8 months and up; also few open gilts. Sure to please. Noted sires.
F. W. FOGELSANGER, Chambersburg, Pa.

Veterinary

Conducted by W. C. Fair, V. S.

Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also the name and address of writer. Initials only will be published. We cannot make reply by mail. This is one of the most valuable columns of the paper and we invite readers to make use of it. Clippings from this column, when properly preserved and classified, make one of the most valuable medical symposiums a farmer-stockman can obtain.

Splint Lameness—We have a 4-year-old work horse that commenced to show slight lameness in left fore leg some 5 weeks ago. Since then he has gradually grown worse and now he is quite lame, especially when first coming out of barn. He always shows lameness when starting, but after traveling a while, moves sound. Have examined his foot for corn, but found none. The leg is not swollen, but on inside of shin 3 inches below knee there is a small hard bunch and none on opposite leg. The horse works every day and whatever is wrong it don't seem to affect his health. H. L. C., Boardman, Pa. You have acted wisely in not treating the case until you were able to correctly locate the ailment. Doubtless you have a case of splint lameness. Give horse rest, clip off hair and apply one part red iodide of mercury and six parts fresh lard once a week. This treatment should be kept up until lameness ceases. If you require his work, paint bunch with tincture of iodine daily, apply very light application of the first mentioned remedy. Don't drive him faster than a walk, as concussion is the most common exciting cause of splint lameness.

Sore Neck.—One of our work horses has been troubled for a long time with a sore neck. A bad fitting collar was the cause. Have applied several commercial remedies that are recommended to heal sore shoulders, but none of them seem to affect a cure. A hard bunch has formed the upper part of it is raw and remains so, especially when he is worked. A. K., Carlisle Springs, Pa. This is a case requiring some surgical work. The bunch should be cut out, then apply one part iodoform and six parts boric acid twice a day. Without resting the horse you will find it troublesome to heal a sore of this kind. Every work horse and mule should have a nice fitting collar, it pays to supply them with the best.

Acute Indigestion.—I have a cow 11 years old that had an attack of milk fever about 12 months ago. She seemingly recovered, thrived and milked well up to September last when she suddenly dropped in milk yield from 8 quarts daily to one quart.. This cow had been eating a good many apples and also got some wild crabapples, but she failed to show symptoms of any sickness, other than a drop in milk yield. Am feeding her corn, oat chop and bran, 8 quarts a day; also has plenty of corn fodder. She seems to be in good condition, but is not with calf. E. W., New Florence, Pa. Doubtless your cow suffered from an attack of acute indigestion. Perhaps she ate too many apples. Mix equal parts ginger, gentian, baking soda and salt and give her a tablespoonful at dose in feed twice a day. Feed her some wheat bran, roots and alfalfa or clover.

Congested Udder—Have 4-year-old cow, due to freshen Jan. 15th, which has an inflamed bag. The whole udder seems to be red colored, but the cow is not sick. I am fearful she may have milk fever. Can it be prevented? L. M., Clinton Mills, N. Y. You are perhaps feeding her too much grain and not feeding enough cooling laxative food. Feed more bran, clover and roots. Besides, she should have some exercise. If her bowels are costive, give enough Epsom salts to open them. If not more than one-third of the milk be drawn from her udder the first 4 days after she freshens, and if her food supply is limited, especially her grain ration she will be less likely to suffer from milk fever. It is well to keep in mind that few cows suffer from milk fever when they have their first or even following the second calf.

Pass along the good word—Merry Christmas.

The Moyer Sale, Syracuse, N. Y. Jan. 4-5-6
270 Head of High Class Foundation Holsteins GUARANTEED UNDER 60-DAY RETEST
23 sons and daughters of 30-lb. cows
20 daughters and grand daughters of 1000-lb cows

The Catalog is Ready
If you are really interested in Holsteins, you will want this book. It contains the pedigrees of as richly a bred collection of cattle as has ever passed through an auction ring. Only the book can tell the story. Send for it. Free for the asking, but sent on request only.
Remember—
Such animals as do not come from accredited herds were tuberculin tested previous to their acceptance for this sale, and every animal in the sale over six months of age will have been tuberculin tested just previous to the sale, and all are sold subject to the usual 60-day retest guarantee. You take no chances.

149 Close Descendants of King Segis
The animals comprising this sale have been selected from eighteen of the leading herds in New York state and they are all consigned by reputable breeders.

Some of the features are as follows:
12 daughters of King Segis Pontiac Alcartra
6 daughters of King Lyons
5 daughters of King Joh
5 daughters of Spring Farm King
5 daughters of Sir Aaggie Mead DeKol
13 daughters of Sir Veeman Vale Pontiac
5 daughters of King Lueds Pontiac Korndyke
6 daughters of Sir Echo Sylvia Pontiac Paul
5 daughters of King Artis Lyons
9 daughters of Winana DeKol King Segis
5 daughters of Annie DeKol Model Segis
5 daughters of Rag Apple Butter Clyde King
6 daughters of Model Darius Glista
2 daughters of Prince Hengerveld Pietje
2 daughters of Sir Pietertje Ormsby Mercedes 17th
3 daughters of King Echo Sylvia Model
30 bred to Empire Segis
25 bred to Sir Aaggie Mead DeKol
BE SURE TO ATTEND

H. A. Moyer, *Director*, Syracuse, N. Y.
THREE BIG DAYS OF SALE—HIGHEST CLASS CATTLE—GET THE CATALOG NOW

Your Opportunity
To buy bulls ready for service from an accredited herd. Through the generosity of several breeders the Penna. State College is securing new herd sires and in order to make room for them it is necessary to sell the present herd sires.
GUERNSEYS—Brookmead Royal Master, 35631, born May, 1915; sire, Langwater Royal Master 23663; daughters, 10 registered; 2 A. R. Dam, Star of Brookmead. A show cow—never tested as udder was injured on show circuit. Price, $250.
AYRSHIRE—Rena Record of Cacapon, 23212; born Oct., 1918. Sire, Imp. Record Time. Daughters on test. Dam, Hill Top Rena Jewess, 11,399 lbs. milk, 483 lbs. fat in 300 days. Price, $350.
Photographs and Pedigrees on Application
Dairy Husbandry Dept., State College, Penna.

GUERNSEYS
"Why wiggle and wobble?" Cow testing association records show that Guernseys produce more butter and at less cost. Send for free booklets.
The American Guernsey Cattle Club
Box M 14 Peterboro, N. H.
QUALITY ECONOMY QUANTITY

Yearling Holstein Bulls
Ready for service, well-grown, and extra good individuals. They are from tested dams, of Ormsby, Veeman, Lyons strains, and are sired by King Lyons Ekster Lad, a prize winning son of King Lyons, sire of nine 30 lb. cows. To make room, will be sold at bargain prices.
I. P. FOSTER & SONS, Owego, Tioga Co., N. Y.

Yearling Holstein Bull For Sale
Sire is by a son of Katie Pietertje Paul Pet, 31.22 lb. and his dam is a 21-lb. granddaughter of Sir [illegible] Lyons De Kol 30.72. The dam is a good A. R. O. 2-year-old backed by many [illegible] lb. records. This bull is well grown, nicely marked and a fine individual. For quick sale, price $125.
H. R. FOSTER, Catatonk, N. Y

BULL CALVES at BARGAIN PRICES
We offer Farmers and Breeders of Guernseys an opportunity to secure exceptionally bred healthy bulls, from a clean, Tuberculin Tested Herd at reasonable prices. King of the May—Dolly Dimple—Golden Secret, and Glenwood breeding out of A. R. dams or dams that will be tested. Write for sales list and Pedigrees.
WAWA DAIRY FARMS, 22 S. 32nd St., Phila., Pa.

FOWLER'S PURE BRED HAMPSHIRES
Will please you.
Best and largest herd in East.
THE FOWLER FARMS, MACUNGIE, PA.

GUERNSEY FOUNDATION STOCK
One A. R. Class [illegible] cow, one heifer with first calf, [illegible] two-year-old bull. May Rose strain; two purebred bull calves.
F. L. EBERSOLE, Buchtelsville, Pa.

WANTED A HOME
for choice registered and high grade Holstein-Friesian heifer and bull calves, $25 and up. Write us your wants. Browncroft Farms, Cortland Co. McGraw, N. Y.

Ayrshire Bull Calves From high record A. R. Dams
ROBERT TEMPLETON & SON, ULSTER, PA.

Registered Holstein Friesian Cattle Sons of the great Finderne Sir Valdessa, a 37 lb. bull, for sale
MILLARD E. BASEHOAR, Littlestown, Pa.

Reg. Holstein Bulls from calves to serviceable age. Herd tuberculin tested under Federal and State supervision. BONNYMEADS Farms, Harrisburg, Pa. R. 1

FINE LINE OF HOLSTEINS
Christmas present for December only. High grade heifer calves at $15 each. C. O. D. Safe arrival guaranteed. Equal bargains in registered heifer and bull calves. Great reduction sale for December. Here is your opportunity of a lifetime.
Maple Lawn Farms, C. W. Ellis, Jr., Cortland, N. Y.

200 HOLSTEINS Guaranteed HEALTHY
Carload of any age in
Registered or Grades
Calves, yearlings, 2 year olds, cows or bulls
60 Day Retest Guaranteed
High grade heifer calves $25 each
John C. Regan, Tully, N. Y.

STEVENS HOLSTEIN FARM
of Cortland, N. Y., offers [illegible] head cows and heifers all ages; also extra high grade Holstein heifer calves $20 each, express paid in lots of 5. [illegible] heifer calves with purebred bull calf $75. Grade [illegible] cows in carload lots. Wire me to meet you.
PAUL H. STEVENS, Prop.

PROMISING HOLSTEIN HEIFERS
Well developed daughters of A. R. O. cows, bred to freshen during January and February, to Dutchland Creamelle [illegible] Lad [illegible]. Price $[illegible] to $200 each. F. O. B. Williamsport. Herd under Federal Supervision. Never any reactors.
West Branch Farm, S. A. Miller, Linden, Pa

ORIGIN FARM
Hornless Holsteins. Registered and A. R. O. animals, all ages, for sale. Federal tested.
GEO. E. STEVENSON, SCRANTON, PA

REG. HOLSTEIN BULL 17 months old, [illegible] per cent white, from a [illegible] sire and [illegible] sure server, good individual, weight [illegible] lbs. Price $135
THE OAKS DAIRY FARM, WYALUSING, PA

MILKING SHORTHORNS—Young bulls, a few cows and young heifers of the best breeding.
C. M. KENNEDY & SONS, ULSTER, PA

Reg. Holstein Bull Calves, from officially tested dams and a 30-lb. sire. Write for prices and pedigrees. Walter M. CRUTTENDEN, Forty Fort, Pa

SUNNYBROOK GUERNSEYS
40 head, free of tuberculosis, bull calves for sale.
EDWIN B. MAULE, COATESVILLE PA

RUGGED PRODUCING AYRSHIRES
The herd has a strictly business atmosphere and they are bred for [illegible] milk and butterfat. If you admire the look of a producer [illegible] show type. Our present offering is one choice bull calf from [illegible] herd and should be excellent [illegible]. Also a number of nice cows and heifers. Herd [illegible] tested.
CRESTMONT FARM, 31 N. FOURTH ST., SUNBURY, PA

Special Subscription Offer
Watch your subscription. You will find printed on the address label of your paper the month and year in which your subscription expires. Jan. 21 indicates that your subscription will expire Jan. 1, 1921. If your label is so dated send in your renewal order.
Subscription rate 1 year 75 cents; 2 years $1.25; 3 years $1.75; 5 years $2.25
PENNSYLVANIA FARMER, 261 S. 3rd Street, Philadelphia, Pa.

TO BEE KEEPERS

Beekeepers of New Jersey and surrounding states within easy traveling distance of Trenton are looking forward with much interest to the annual meeting of the New Jersey Beekeepers' Association on Jan. 13-14, 1921. The interest in the larger hive is keen at this time therefore when Mr. C. P. Dadant discusses the Dadant Hive and System of Beekeeping the meeting place will be packed. In the evening of the 13th Mr. Dadant will give an interesting sketch of American and Foreign beekeeping at the annual dinner. With Dr. Thos. J. Headlee as toastmaster a very enjoyable evening is assured.

To make the program complete Mr. George H. Rea, agricultural expert of New York, and Mr. Myers, a practical honey producer of the same state, will also address the meeting.

WOMAN NAMED STATE SEED EXPERT

Miss Grace M. Cole, for several years with the United States Department of Agriculture seed inspection, has been appointed seed analyist for the Pennsylvania Department of Agriculture by Secretary Fred Rasmussen. She is the first woman to be named to such a position and will have charge of analyses of seeds forwarded to the Capitol by farmers to determine value and purity. Miss Cole will work with the new state botanist, Dr. E. M. Gress, in the new laboratory of the Department of Agriculture, to be devoted to such work. Heretofore the Bureau of Chemistry has handled the seed inspection work. Germinating tests, as well as purity tests, will be made hereafter.

FARM AGENT PROVES WORTH OF GOOD SEED

All that is necessary to prove that a country farm agent can "practice what he preaches" is to glance at the potato production record obtained during the past year on the farm of Neisley Brothers, near Mechanicsburg, Cumberland County. Howard G. Neisley, a State College graduate, now agricultural extension representative in Dauphin county, and his brother Cyrus, last spring offered to undertake the management of their father's farm in the Cumberland Valley. When potato planting time came it was found that the father had on hand enough home grown spuds to plant the usual field of five acres. But the Niesley boys would have none of the local product, and sold this seed to purchase some guaranteed disease-free seed from other sections. As soon as the plants appeared above the ground they bought a potato spraying machine and treated the vines thruout the summer with Bordeaux mixture. Just to show "Dad" they planted a little of the home grown seed, and ran check rows with and without spraying. Increased yield thru spraying and use of good seed will pay for their spraying machine the first year, and this is why:

The yield of home grown seed, which showed forty per cent "leaf roll" was 332 bushels to the acre; but the disease-free seed yielded an average of 438 bushels, or an increase of 105 bushels per acre. Local seed unsprayed yielded only 216 bushels, and spraying increase this by 117 bushels. So by using the disease-free seed and the sprayer, the Niesley brothers have 222 bushels more to the acre by getting away from the old methods, no small figure when they are able to guarantee their potatoes against rotting, which comparatively few Pennsylvania growers can do this year. To top off this record, their yield of 438 bushels per acre is the best in Central Pennsylvania.

VEGETABLE EXHIBIT TO BE PART OF STATE SHOW

An extensive exhibit of Pennsylvania grown vegetables will be one of the features of the Fifth Annual Farm Products Show, which will be held in Harrisburg, January 24-28. The vegetables will comprise the choicest from every section and exhibits receiving first honors will be entitled to all State championship honors.

Following are the rules governing the vegetable exhibits, the classes and prizes:

Entries are open to all vegetable growers in Pennsylvania, and all exhibits must have been grown in Pennsylvania by other exhibitors.

No more than one entry in any one class will be accepted from the same individual.

Marketable value will be given preference in judging.

In classes 2 to 9 inclusive, the judges will give attention to the type of package, its attractiveness and general adaptability to local market or shipping purposes; and to grading and packing as well as to the quality of the produce itself.

All exhibits must be in place January 24, 1921, so that they may be set up and judged Tuesday night.

Apply to W. B. Nissley, State College, Pa., or to your County Agent for entry blanks and shipping tags.

Class 1—Best collection exhibit of all kinds of vegetables. Premium, first, $25; second, $15; third, $10.

Class 2—One dozen stalks Celery, any named variety. Premium, first, $4; second, $3.

Class 3—Commercial package of Witloof Chicory—not less than three pounds. Premium, first, $4; second, $2.00.

Class 4—Commercial package of Greenhouse Tomatoes—not less than five pounds. Premium, first, $4; second, $2.

Class 5—Commercial package of Greenhouse Lettuce—not less than 3 pounds. Premium, first, $3; second, $2.00.

Class 6—Commercial package of onions—any named variety. Premium, first, $5; second, $3.

Class 7—Commercial package of carrots—any named variety. Premium, first, $4; second, $2.

Class 8—Commercial package of Turnips—any named variety. Premium, first, $4; second, $2.

Class 9—Commercial package of beets—any named variety. Premium, first, $4; second, $2.

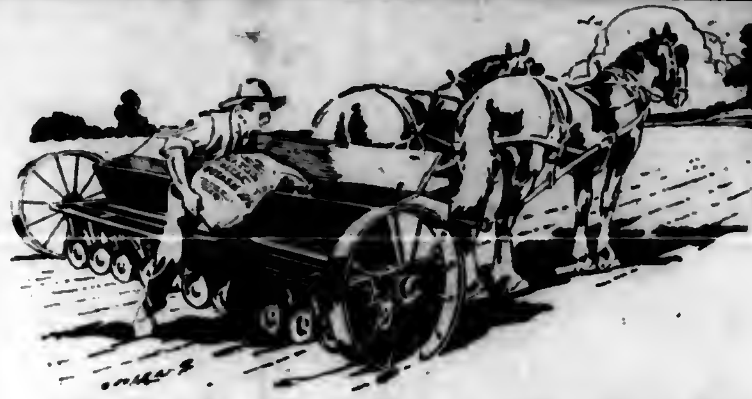
NEW YORK HORT MEETING

Secretary Roy P. McPherson has announced the days of the annual meeting of the New York State Horticultural Society as January 12, 13 and 14 and the place at Exposition Park, Rochester.

Besides the display of fruit and exhibits Mr. McPherson promises that the educational feature will equal those of previous years.

The call is for the fellows who can be depended upon, under any and all circumstances.

The things that count are the things that last.



Restore the Potash

During the past few years farmers have been urged to bend every effort to produce maximum crops without giving much consideration to the effect on their soils. Established rotations were broken up and the very best parts of the farm put into the most needed crops, while the poorer parts were neglected.

In a way it was a return to the pioneer's method of mining the soil.

Today is the period of readjustment for the farmer as well as for the merchant and the manufacturer.

The farm labor situation and the uncertainty of future prices are such that prudence demands that the cost of producing a unit of crop be reduced as much as possible. This requires more crop units per acre and a return to the rotations known to be best for a given locality.

The great factor in reducing the cost of crop production is the right method of feeding the crops.

The composition of commercial plant foods has been profoundly changed during the period of Potash famine. Phosphoric Acid has replaced all or a part of the Potash in American fertilizer formulas, while just the opposite has taken place in Europe, where there was a shortage of phosphates.

Now is the time to get back to normal again and to return to the fertilizer formulas that were so profitable and satisfactory in the past. But this cannot be done without effort on the part of the farmer and without sufficient notice to the manufacturer to prepare for the change.

Therefore think the matter over carefully, and if your previous experience has shown you that

Potash Pays

notify your dealer that you wish to use fertilizers with 5 to 10 per cent. of Potash and a little more to make up for the drain on the soil during the Potash famine.

And do it right away, for it takes time for the manufacturer to import it and it is only fair that he should know what your demands will be.

The price of Potash has fallen much faster than the prices of farm products so you may feel assured that you can again get a profit from its use. The main point is to insist that the right kind of fertilizer shall be ready for you when needed. In order to insure this, prompt action on your part is essential.

Take up the matter with your dealer at once. If we can help you write to us.

SOIL AND CROP SERVICE, POTASH SYNDICATE
H. A. HUSTON, Manager
42 Broadway New York

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Made to your order from Horse, Cow, Calf, or any hide or skin with hair or fur on it.

You save as high as 30% by using your own furs.

Free catalogue with instructions for handling furs. Fur garments repaired and remodeled.

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Large and small game, birds and fish mounted. Prompt service, expert attention. Price quoted is price charged.

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LET US TAN YOUR HIDE.

Horse or Cow hide, Calf or other skins with hair or fur on, and make them into coats (for men and women), robes, rugs or gloves when so ordered. Your fur goods will cost you less than to buy them and be worth more.

Our illustrated catalog tells how to take off and care for hides; how and when we pay the freight both ways; about our safe dyeing process on cow and horse hide, calf and other skins; about the fur goods and game trophies we sell, taxidermy, etc.

Then we have recently got out another we call our Fashion Book, wholly devoted to fashion plates of muffs, neckwear and other fine fur garments, with tanning and making charges. Also fur garments remodeled and repaired.

For Fox, Raccoon and smaller skins, the Fashion Book is all you need. Catalog is for big stuff.

You can have either book by sending your correct address naming which, or both books if you need both. Address

The Crosby Frisian Fur Company,
571 Lyell Ave., Rochester, N. Y.

HIDES TANNED

for sets, coats, robes, caps, rugs etc. Have your furs tanned and made into attractive garments for mother, wife, sister or sweetheart. Besides having better furs, you save 30 to 50 per cent. and get and give greater personal satisfaction and pride because the garments were made from furs you trap.

FREE CATALOG Send for it today. It gives full information and latest style suggestions.

H. WILLARD SON & CO., 8 S. 1st. St.
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Skunk, Mink, Muskrats

and all other kinds of Raw Furs wanted. Write for price-list and shipping tags. Twenty-three years in business

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Established 33 years in New York. Capital surplus and resources over $5,000,000.

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